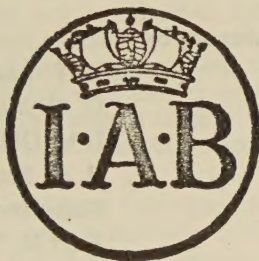


HELMINTHOLOGICAL ABSTRACTS

incorporating
BIBLIOGRAPHY OF HELMINTHOLOGY
For the Year 1938.



IMPERIAL BUREAU OF AGRICULTURAL PARASITOLOGY
(HELMINTHOLOGY)

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HELMINTHOLOGICAL ABSTRACTS

incorporating

BIBLIOGRAPHY OF HELMINTHOLOGY

Abstracts in the present number are by :

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HELMINTHOLOGICAL ABSTRACTS

INCORPORATING BIBLIOGRAPHY OF HELMINTHOLOGY
FOR THE YEAR 1938.

Vol. VII, Part 3.

159—Acta Medica Scandinavica.

- a. TÖTTERMAN, G., 1938.—“Über die Pathogenese der Wurmanämie.” 96 (2/4), 268-288.
- b. SIEVERS, O., 1938.—“Serologische Prüfungen der Sera von *Bothriocephalus latus*-Trägern.” 96 (2/4), 289-303.

(159a) By feeding daily 0.3 g. of dried *Dibothriocephalus* (or an equivalent dose of the alcohol extract) to 9 cases with a past history of *Dibothriocephalus* anaemia, Tötterman has found that 5 responded with a marked diminution of red cells but with little or no decrease in haemoglobin. The reaction failed altogether in 3 normal subjects and in 3 cases of cryptogenetic P.A. The reaction is held to reveal a hypersensitivity to the worm toxin. B.G.P.

(159b) Sievers could demonstrate complement-fixation, using the sera of *Dibothriocephalus*-carriers against alcoholic extract of the tapeworm, in only 10 of 65 cases, and in 3 of these the reaction was slight. Forty-four normal sera gave 2 slight positives. *Dibothriocephalus* antigen could be demonstrated in only 2 sera. Tests with sera of persons given tapeworm extract *per os* suggest that there is some degree of antibody production. B.G.P.

160—Acta Pathologica et Microbiologica Scandinavica. Supplementum.

- a. JENSEN, V. & ROTH, H., 1938.—“Zur Einwanderung der Trichinenlarve in die quergestreifte Muskelfaser.” Supplementum 37, 259-271.

(160a) Jensen & Roth have studied the migration of *Trichinella* larvae in voluntary muscles. The young larvae leave the capillaries, penetrate the sarcolemma, and come to lie actually in the substance of the muscle fibre itself. Penetration, which, it has been suggested, is mechanically achieved by means of a chitinous strengthening of the anterior end, may perhaps be assisted also by enzymatic action. Within the fibre itself the larva undergoes its further development, while the muscle fibre shows progressive degenerative changes. Cyst formation is not described. V.D./vs.

161—Agricultural Gazette of New South Wales.

- a. ROSE, A. L., 1938.—“The liver fluke of sheep and cattle. Description, life history and control measures.” 49 (6), 311-316; (7), 365-369; (8), 428-430, 434.

(161a) Published in three parts, this account of the life-history and control of *Fasciola hepatica* in New South Wales is given by Rose in non-technical language. The first part describes the life-history (the local intermediary being *Limnaea brazieri*), the symptoms in acute and chronic cases, and the method of gun-drenching with CCl_4 . The second part describes the habitats of the intermediary and its control by CuSO_4 , and the effect of climate on its spread. The third part deals with geographical distribution in N.S.W. and with fluke in cattle, and summarizes the important points. Briefly, the advice to farmers is to drain swampy land where feasible, treating the residual drains with CuSO_4 in October and February each year. Where drainage is impracticable, prophylactic drenching is recommended in March or April and again in September. [N.B. The above months are appropriate to the southern hemisphere.] B.G.P.

162—American Journal of Cancer.

- a. DUNNING, W. F., CURTIS, M. R. & BULLOCK, F. D., 1938.—“A study of the growth of *Cysticercus sarcomata* 4337 and 4338 from grafts of each tumor simultaneously transplanted in the subcutaneous tissues of the same hosts.” 32 (1), 90-113.

(162a) This paper concerns a statistical analysis of the growth and size of grafts of mixed-cell sarcomata in relation to the genetic constitution of the mice used as hosts: the paper is helminthological only in the sense that the tumours used were of cysticercal origin. The tumours were previously described by Mendelsohn [see Helm. Abs., Vol. III, No. 281c]. B.G.P.

163—American Journal of Hygiene.

- a. CHANDLER, A. C., 1938.—“Further experiments on passive immunity of rats to *Nippostrongylus* infections.” 28 (1), 51-62.
 b. ROTH, H., 1938.—“Experimental studies on the course of *Trichina* infection in guinea pigs. I. The minimum dose of *Trichina* larvae required to produce infestation of the muscles; with an account of the potential productiveness of the female *Trichina*.” 28 (1), 85-103.

(163a) Chandler has passively produced in rats a resistance to *Nippostrongylus* infection, using a serum from rats that had been frequently exposed to infections with living larvae. The resistance was manifested by inhibition of egg production and by dwarfing of adult worms. Larvae inoculated under the skin were more effective in producing useful serum than those which were left to penetrate the skin by their own activity. Dead larvae were not very useful for the production of serum. Even the best serum, however, only retained its immunizing capacity for a period up to 2 weeks. P.A.C.

(163b) By infecting guinea-pigs with determined minimal doses of *Trichinella* larvae, both of diagnosed and undiagnosed sex, and making direct counts of the resulting larvae in the muscles, Roth has shown that the ratio of trichinae encysted in the muscles per female ingested varies from about 1,000 to about 2,500. Rates of from 1,500 to 2,000 are most frequent, but for several reasons the potential maximum number of larvae released by a single female is much higher than the counts indicate. Guinea-pigs prove to be much less resistant to trichinosis than other hosts, as regards longevity of the intestinal adults, and therefore as regards the coefficient of production of the females.

V.D.VS.

164—American Journal of Tropical Medicine.

- a. MUELLER, J. F., 1938.—“Studies on *Sparganum mansonoides* and *Sparganum proliferum*.” 18 (3), 303-324.
- b. WRIGHT, H. E., 1938.—“Further observations on the incidence of *Hepaticola (Capillaria) hepatica* ova in human feces.” 18 (3), 329-330.
- c. REARDON, L., 1938.—“Studies on oxyuriasis. X. Artifacts in ‘cellophane’ simulating pinworm ova.” 18 (4), 427-431.

(164a) Mueller finds that the sparganum of *Diphyllobothrium mansonoides* [see Helm. Abs., Vol. VII, No. 6a], fed orally to mice, rats, monkeys and leopard frogs, penetrates the intestinal wall and continues to grow as a sparganum. Up to 5 successive transfers in mice, extending for one year, have been experimentally effected without diminution of the larva's vigour. The adult scolex from the cat has also been transplanted into the tissues of a mouse without degeneration or reversion to a sparganum. Prolonged heavy infections in monkeys produce an elephantiasis especially in the lower region of the trunk, prior injections of tapeworm substance protecting the monkey against this reaction. An eosinophilia of from 15 to 35% persists for some months in the various intermediaries, while the definitive host shows a temporary eosinophilia of about 8%. Monkeys have been infected orally with the procercoids in Cyclops, and it is likely that man can become infected similarly. The parasite is found in cats throughout the eastern U.S.A. at least, and human infections are probably more common than records show. *Sparganum proliferum* shows internal asymmetry and degeneration and is probably not a distinct species but a modification (of *S. mansonii* or *S. mansonoides*) possibly due to long life in the tissues of man.

B.G.P.

(164b) Wright briefly reports on the parasites of 517 persons in 6 villages on the Chagres River, Panama. The incidence figures are: one or more parasites 92.4%, hookworm 52%, *Ascaris* 46.7%, *Strongyloides* 34.2%, and *Trichuris* 30.3%. In one village 16 out of 194 persons showed eggs of *Hepaticola hepatica*. These eggs were in the blastula stage and would not embryonate further, 10 of the cases were negative 10 days later, and rats and cockroaches in their houses were negative; it is therefore assumed that the eggs represented a food contamination and not an infection.

B.G.P.

165—Annales de Parasitologie Humaine et Comparée.

- a. BRUMPT, E. & URBAIN, A., 1938.—“Épizootie vermineuse par acanthocéphales (*Prosthenorchis*) ayant sévi à la singerie du Muséum de Paris.” 16 (4), 289-300.
- b. BRUMPT, E. & DESPORTES, C., 1938.—“Hôtes intermédiaires expérimentaux de deux espèces d'acanthocéphales (*Prosthenorchis spirula* et *P. elegans*) parasites des lémuriens et des singes.” 16 (4), 301-304.
- c. DESPORTES, C., 1938.—“*Filaria oesophagea* Polonio 1859, parasite de la couleuvre d'Italie, est un *Dracunculus* très voisin de la filaire de Médine.” 16 (4), 305-326.
- d. CABALLERO y C., E., 1938.—“Nématodes parasites des reptiles du Mexique.” 16 (4), 327-333.
- e. DOLLFUS, R. P., 1938.—“Une espèce à ajouter à la liste des helminthes du chat.” 16 (4), p. 374.

(165a) Brumpt & Urbain describe the infection of *Prosthenorchis spirula* and *P. elegans* which was responsible for 7 deaths in the monkey house of the Paris Museum menagerie. The infection was carried by *Blatella germanica*, which cannot be the normal intermediate host, as it is not known in the countries from which the animals came. By dusting the houses with sodium fluoro-silicate and other powders, which destroy the cockroaches, the parasite was brought under control. Experimentally a baboon, a rhesus monkey, a cat, a fox, one specimen of *Meles meles*, and 2 of *Erinaceus europaeus* have been infected by feeding with infected cockroaches.

E.M.S.

(165b) Brumpt & Desportes have tested various cockroaches and beetles as intermediate hosts of *Prosthenorchis spirula* and *P. elegans* by feeding them with small pieces of bread sown with eggs from the faeces of an infected *Lemur fulvus*. None of the beetles acquired any infection, while of the cockroaches *Periplaneta americana* and *P. orientalis* were consistently negative, and *Rhyarobia maderae* and *Blabera fusca* were found to become infected in varying degrees.

E.M.S.

(165c) A description is given of *Dracunculus oesophageus* (Polonio, 1859) which occurs in the body cavity of 57% of the *Tropidonotus natrix persa* in Italy. It develops easily in *Macrocylops fuscus*.

R.T.L.

(165d) *Parathelandros scelopori* n. sp. from *Sceloporus torquatus*, adding a third species to the genus, and *Kalicephalus humilis* n. sp. from *Bothrops atrox* are recorded from Mexico.

R.T.L.

(165e) *Nephridiacanthus kamerunensis* was recorded by Meyer in 1931 from “Esingi” in the Cameroons. Dollfus points out that “Esingi” is the local name for a cat.

R.T.L.

166—Annales de la Société Belge de Médecine Tropicale.

- a. BERGHE, L. VAN DEN, 1938.—“Les parasites intestinaux des pygmées Efé de l'Ituri (Congo belge).” 18 (2), 293-296.
- b. CLEMENT, L., 1938.—“Contribution à l'étude du parasitisme intestinal chez les indigènes du territoire de Ruhengeri (Ruanda).” 18 (2), 347-349.
- c. LAMBRICHTS, G., 1938.—“Oedème filarien de la face.” 18 (2), 351-352.

(166a) In normal pygmies of the Efé race helminths occur in the following percentages: *Ascaris lumbricoides* 22%, *Necator americanus* 40%, *Trichuris trichiura* 27.5%, *Schistosoma mansoni* 11%. The *Necator americanus* was diagnosed from adults. A single Planorbis, which discharged bifid-tailed cercariae, was found in the pygmy village of Walesse. R.T.L.

(166b) The incidence of helminths in 6 provinces of Ruhengeri (Ruanda) is recorded. *Ascaris* is universally present. *Taenia* occurs in from 0.09% in Buhoma to 20% in Mulera. In the cold climate hookworm is rare. Its highest incidence is in Bukonia where it reaches 2.8%. R.T.L.

167—Annals and Magazine of Natural History.

- a. PANDE, B. P., 1938.—“On a new genus of the Pleurogenetinae (Lecithodendriidae, Trematoda) from a kingfisher.” Ser. 11, 2 (8), 199-204.

(167a) Pande describes *Basantisia ramai* n.g., n.sp., from the small intestine of an Indian kingfisher, *Ceryle raddis leucomanara*. Features of the genus are the short intestinal caeca, the genital pore situated just behind the ventral sucker, and the horseshoe-shaped cirrus sac almost completely encircling the sucker. E.M.S.

168—Annals of Tropical Medicine and Parasitology.

- a. KAU, L. S. & WU, K., 1938.—“A note on the pathology of schistosomiasis due to *S. japonicum* among cattle in China.” 32 (2), 129-131.
 b. KAU, L. S. & WU, K., 1938.—“Pathological findings among pigs experimentally infected with *Fasciolopsis buskii*.” 32 (2), 133-134.
 c. DAENGSVANG, S. & TANSURAT, P., 1938.—“A contribution to the knowledge of the second intermediate hosts of *Gnathostoma spinigerum* Owen, 1836.” 32 (2), 137-140.
 d. KIRSHNER, A., 1938.—“A new species of nematode (*Subulura leachii*) from a kingfisher.” 32 (2), 159-161.
 e. SOUTHWELL, T. & KIRSHNER, A., 1938.—“Some observations on guinea-worm larvae.” 32 (2), 193-196.

(168a) The morbid anatomy of *Schistosoma japonicum* in cattle is chiefly found in the liver and spleen. Most of the livers of infected animals, seen at the abattoir in Shanghai, are much atrophied. The surface is nodular. The tissue is cirrhotic with organized emboli. The spleens are usually cirrhotic and atrophic, adhering to the adjacent viscera. Pseudotubercles containing distorted ova occur in some areas. *Fasciola hepatica* was sometimes present. R.T.L.

(168b) In pigs experimentally infected with cysts of *Fasciolopsis buskii* from water caltrops collected near Hangchow, the main gross pathological lesions were mostly in the duodenum and jejunum. These consisted of minute petechial haemorrhages with submucosal congestion but there were no gross erosions of the mucosa. The mesenteric lymph nodes were enlarged and congested. The serous coat showed no connective tissue hyperplasia. R.T.L.

(168c) Daengsvang & Tansurat found eels, frogs and fish from markets in Siam naturally infected with encysted gnathostome larvae similar to and

presumably identical with the larva of *Gnathostoma spinigerum*. The infection rates with the larvae were 91·67% of frogs, *Rana rugulosa* Wiegmann; 80% of eels, *Monopterus albus* (Zuiewu); 37·5% of *Ophiocephalus striatus* Bloch, and 30% of *Clarias batrachus* (Linnaeus). These animals are used as food, and sometimes eaten raw, both by humans and by cats and dogs. The organs infected are the muscles and liver and in addition the fat-body in the frogs. J.J.C.B.

(168d) Kirshner's illustrated description of *Subulura leachii* n. sp. from the intestine of *Dacelo leachi* in New Guinea includes a table, giving spicule-length, position of sucker, and length of male tail, which serves to differentiate this species from 12 other species which also have equal spicules and 11 pairs of papillae. B.G.P.

(168e) *Dracunculus medinensis* undergoes incomplete development in *Cyclops vernalis* and in *C. prasinus*. The larvae die in sterile tap water in about 6 hours. Larvae feed on the stomach contents and acquire a darker colour before penetrating the gut of cyclops. As many as 15 larvae can live in an infected cyclops without causing its death. In the 6th week after infection, in England, a moult occurred. The skin of a second moult appeared beneath that of the first. R.T.L.

169—Annual Report of the Agricultural and Horticultural Research Station, Long Ashton, 1937.

- a. WALTON, C. L., 1938.—“The origin of infestation by the oat strain of the eelworm *Anguillulina dipsaci* (Kühn).” pp. 85-92.
- b. OGILVIE, L., HICKMAN, C. J. & WALTON, C. L., 1938.—“The effect of fertilisers on peas affected with ‘pea sickness.’ Pot experiments.” pp. 118-126.

(169a) The omission of oats from the crop rotation of fields infested with *Anguillulina dipsaci*, or the laying down of grass even for 6 years, is not alone sufficient to eradicate the infection. The continuation of the infestation is attributed to weeds rather than to infected seeds. *Convolvulus arvensis*, *Veronica agrestis*, *Brassica sinapis* and *Galium Aparine* were found to be infected. R.T.L.

(169b) Ogilvie, Hickman & Walton grew peas in soil infected with the pea strain of *Heterodera schachtii* treated with various mixtures of artificials. Three treatments were applied: superphosphate with sulphate of potash, nitrochalk with superphosphate, and nitrochalk with superphosphate and sulphate of potash. The superphosphate was applied at the rate of 25 cwt. per acre and the sulphate of potash and nitrochalk each at 20 cwt. per acre. Two series of pots were set up, one in which the soil was sterilized, the other unsterilized. Measurements of fresh and dry weights of the plants and lengths of haulm were taken and counts were made of the cysts in the soil after the growth of the plants. Potash gave increased growth in the sterilized soil, showing that there was a natural deficiency of this constituent. In the unsterilized soil only nitrogen caused increased growth. None of the treatments affected the cyst counts. It is concluded that the nitrogen

metabolism of the plant is affected by infestation with eelworm and that addition of nitrogen enables the plants to obtain a sufficient amount of this element and would be a practical method of obtaining normal crops from "pea-sick" soil.

M.T.F.

170—Archives of Disease in Childhood.

- a. WILLIAMS, C. D., 1938.—"Clinical ascariasis in children." 13 (75), 235-240.
- b. ROGERS, J. S. Y. & TUDHOPE, G. R., 1938.—"Hydatid cyst of the spinal canal successfully treated by operation." 13 (75), 269-274.

171—Archives de l'Institut Pasteur de Tunis.

- a. BALOZET, L. & CALLOT, J., 1938.—"Trématodes de Tunisie. 1. Trématodes de *Rana ridibunda* Pallas. 2. Infestation de *Bulinus truncatus* par *Schistosoma bovis* et *Paramphistomum cervi* dans la Tunisie septentrionale." 27 (1), 18-30; (2), 184-188.

172—Archivio Italiano di Scienze Mediche Coloniali e di Parassitologia.

- a. IMPALLOMENI, R., 1938.—"Di un nuovo preparato di antimonio nella cura delle schistosomiasi umane." 19 (6), 370-376.

(172a) Impallomeni reports on the successful use of "Stibional B," a new pentavalent antimony preparation, in the treatment of 20 cases of *Schistosoma haematobium* infection, and one case of *S. mansoni* infection. The substance is administered intravenously and the doses recommended are 2.5 c.c. on the 1st day, 5 c.c. on the 2nd day, and 10 c.c. on the 3rd day. Injections are suspended on the 4th day, but continued on the 5th, 6th and 7th, in daily doses of 10 c.c. If a complete cure has not then been obtained, the toxicity of the drug is sufficiently low to allow of further doses of 10 c.c. daily, in accordance with individual toleration.

K.S.

173—Berliner (und Münchener) Tierärztliche Wochenschrift.

- a. NÖRR, J., 1938.—"Die Härte der nur sechswöchigen Klagefrist bei der Drehkrankheit der Rinder und Schafe. Ein Beitrag zur gerichtlichen Tiermedizin." Jahrg. 1938 (8), 109-110.
- b. KAYSER, W., 1938.—"Einige Beobachtungen bei Fallwilduntersuchungen. I. Ein Beitrag zum Vorkommen von Leberegeln bei Rehen." Jahrg. 1938 (26), 384-385.

(173a) In Germany the vendor of sheep or cattle, under a written guarantee of health and condition, is liable during a maximum period of 6 weeks from the date of sale. Nörr illustrates with an actual incident the potential harshness of this law in the case of coenuriasis. He distinguishes: a latent period of 10 to 14 days while the onchosphere is migrating, a patent period of cerebral irritation when the larva arrives at its site (up to 10 days), a second latent period of 2 to 7 months while the cyst is growing, and the

final patent stage. If an animal is purchased early in the 2nd latent period the disease will not be detected until after the expiry of the guarantee. B.G.P.

(173b) Kayser briefly describes 3 cases of *Fasciola hepatica* infestation in roe-deer. B.G.P.

174—Boletín del Instituto de Clínica Quirúrgica.

- a. IVANISSEVICH, O. & FERRARI, R. C., 1938.—“Equinococosis hidatídica.” 14 (115), 255-272.

175—Boletín del Ministerio de Sanidad y Asistencia Social.

- a. SCOTT, J. A., 1938.—“La esquistosomiasis o bilharziosis desde el punto de vista biológico.” Año 2, 1 (23/24), 1507-1519.

176—Brasil-Medico.

- a. MARTINS, A. V. & ANJOS, W. V. DOS, 1938.—“‘Schistosomose mansoni’ no norte de Minas Geraes.” 52 (36), 812-816.

177—British Medical Journal.

- a. CAWSTON, F. G., 1938.—“Antimony therapy.” [Correspondence.] Year 1938, 2 (4047), p. 258.

(177a) In a case briefly recorded 30.5 c.c. of Anthiomaline over a period of 27 days was insufficient to effect a cure, thus confirming the opinion that it is seldom wise to discontinue treatment before the 28th day. R.T.L.

178—Bulletin de l'Académie de Médecine.

- a. DUNGAL, N., 1938.—“Adénomatosose infectieuse du poumon chez le mouton. Ses rapports avec la pneumonie vermineuse et la Jaagsiekte.” 119 (3), 98-104.

(178a) [This paper appears in full in English in Proc. Roy. Soc. Med., 31 (5), 497-505. See Helm. Abs., Vol. VII, No. 51a.]

179—Bulletin of the Fan Memorial Institute of Biology. Zoological Series.

- a. HSÜ, H. F., DU, S. D. & CHOW, C. Y., 1938.—“On two species of trematodes from the liver of the cat in China.” 8 (1), 1-8.
 b. HSÜ, H. F. & CHOW, C. Y., 1938.—“Notes on three species of Strongyloidea (Nematoda) from Germany.” 8 (2), 115-119.
 c. HSÜ, H. F., 1938.—“Studies on the food and the digestive system of certain parasites. I. On the food of the dog hookworm, *Ancylostoma caninum*.” 8 (2), 121-132.
 d. HSÜ, H. F. & CHOW, C. Y., 1938.—“Studies on human intestinal helminths in 809 autopsy cases.” 8 (3), 245-272.

(179a) *Microtrema truncatum* Kobayashi and *Metorchis* sp. are described from the cat in China. R.T.L.

(179b) Hsü & Chow redescribe 3 nematodes which they found in Germany. *Pseudalius inflexus* from *Phocaena phocaena* was interesting in that the 4 submedian cephalic papillae are associated with double nerve endings. In the lateral lobes of the bursa, they have seen an extra papilla and there is a pair of papillae in the dorsal lobe. A specific diagnosis of *Torynurus convolutus* from *Phocaena phocaena* can be made by examination of the papillary terminations of the bursal lobes, there being only a single one in each lateral lobe. There is a pair on the dorsal lobe and the ventral lobe is represented only by 2 papillary terminations. There are papillae on the tail of the female. The condition of the dorsal ray in *Oswaldocruzia molgeta* from *Molge vulgaris* is specific, there being a well defined pair of lateral branches and the tip is deeply bifurcated, each branch dividing deeply again.

P.A.C.

(179c) Hsü has carried out histological examinations of the intestinal contents of *Ancylostoma caninum*, obtained by operation on the living host. The results showed that many red and white blood cells, along with a smaller number of cells derived from the mucosa of the host, were disintegrated in the parasite's intestine. Pigment granules containing iron were found in the intestinal cells of the worm, demonstrating the absorption of some of the material from the disintegrated cells.

R.H.H.

180—Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris.

- a. SÈZE, S. DE, LAPLANE, L. & FIMBEL, M., 1938.—“Cysticercose optochiasmatique.” 54 (24), 1202-1206.
- b. LÉVI-VALENSI, A., CHARLES, F. & VIALLET, P., 1938.—“Echinococcose pulmonaire métastatique et tuberculose.” 54 (25), 1284-1287.

181—Bulletin de la Société Neuchâteloise des Sciences Naturelles.

- a. DUBOIS, G., 1938.—“Contribution à l'étude des diplostomes d'oiseaux (Trematoda: Diplostomidae Poirier 1886) du Musée de Vienne.” Année 1937, 62, 99-128.
- b. BAER, J. G., 1938.—“Un genre nouveau de cestode d'oiseaux.” Année 1937, 62, 149-156.

(181a) Dubois gives illustrated descriptions of several of the new genera and species created by him in 1936 [see Helm. Abs., Vol. V, No. 380a]. The material described forms part of the helminthological collection of the Vienna Museum, and is from Brazilian birds.

E.M.S.

(181b) Baer redescribes a cestode parasite from the bird *Phoeniconaias minor* which had been described originally as *Hymenolepis phoeniconaiadis*. He creates the new genus *Cladogynia* for it because it possesses no true cirrus sac. There is a curious copulatory apparatus described in detail and the female genitalia shows peculiarities not seen in the genus *Hymenolepis*.

F.A.C.

182—Bulletin de la Société de Pathologie Exotique.

- a. D'ANELLA & TOURENC, 1938.—“ Sur deux cas d'intoxication mortelle par le tetrachlorure de carbone.” 31 (2), 124-125.
- b. ANDERSON, C. & LEHUCHER, P., 1938.—“ Note préliminaire sur le premier cas autochtone d'onchocercose cutanée observé en Tunisie.” 31 (7), 655-658.

183—Canadian Journal of Comparative Medicine.

- a. ROSE, G. A., 1938.—“ Common parasites encountered on meat inspection.” 2 (7), 195-199.

184—Canadian Journal of Research. Section D. Zoological Sciences.

- a. CANNON, D. G., 1938.—“ Some trematode parasites of ducks and geese in Eastern Canada.” 16 (9), 268-280.

(184a) Cannon's material was obtained from the breeding grounds of ducks and geese in Eastern Canada. *Stephanoprora mergi* n. sp. was found in the caeca of *Mergus merganser americanus*. Recorded for the first time from America are *Echinoparyphium elegans* from *Anas rubripes rubripes* and *Psilochasmus longicirratus* from the same host and from *Branta canadensis*. New host records are *Hypoderaeum conoideum* and *Zygocotyle lunata* from *Anas rubripes*, *Apatemon gracilis* from *Glaucionetta clangula americana*, and *Notocotylus attenuatus* from *Chen hyperborea hyperborea*. E.M.S.

185—Chinese Medical Journal.

- a. WANG, L. S., 1938.—“ Human infection of *Hymenolepis nana* in North China. An analysis of 171 cases.” 54 (2), 141-150.
- b. WILLIAMS, T. H., 1938.—“ Human Schistosoma infestation in Szechwan. A case report.” 54 (2), 159-161.
- c. YAO, Y. T., 1938.—“ Schistosomiasis in Kwangsi.” 54 (2), p. 162.
- d. WINFIELD, G. F. & CHIN, T. H., 1938.—“ Studies on the control of fecal-borne diseases in North China. VI. The epidemiology of *Ascaris lumbricoides* in an urban population.” 54 (3), 233-254.

(185c) Schistosomiasis due to *S. japonicum* is recorded for the first time from the basin of the West River, Kwangsi. R.T.L.

(185d) Winfield & Chin present the results of egg count examinations of 393 soldiers and of different groups of 2,751 civilians, and environmental studies on selected families in Tsinan, Shantung, China. The degree of *Ascaris* infestation is compared in the different civilian groups and the fact that the soldier group showed a lighter and less frequent infestation than any of the civilian groups is commented upon. The average egg count of the city area civilian total series was less than one third that of a rural group examined in Lungshan and reported on in a previous publication. The environmental studies indicated that the pollution of the household environment is probably the most significant factor in *Ascaris* infestation, and the important part played by smaller children in causing this is emphasized. Light infestations in families are correlated with better economic conditions and hence less crowding in houses. Although there is a lower level of

Ascaris infestation in the city than in the country, the reverse condition holds for hookworm and Trichuris. The soldier group has the highest frequency of hookworm infestation.

J.J.C.B.

186—Clujul Médical.

- *a. BORZA, Z. S., 1938.—[Ascariasis of biliary tract in connection with two cases.] 19, 24-28.

187—Comptes Rendus des Séances de l'Académie des Sciences.

- a. DOLLFUS, R. P., 1938.—“ Cycle évolutif d'un trématode du genre *Coitocaecum* W. Nicoll. Progenèse de la larve métacercaire chez des amphipodes.” 207 (8), 431-433.

(187a) Dollfus does not give a specific name to his species of *Coitocaecum*, as it is not certainly new. The sporocyst is found in the snail *Theodoxia fluviatilis*. The cercaria penetrates and encysts in the amphipods, *Gammarus pulex* and *Echinogammarus berilloni*, where it often develops progenetically, even to the stage of laying eggs. The normal definitive hosts are the fishes *Cottus gobio* and (experimentally) *Anguilla anguilla*.

E.M.S.

188—Comptes Rendus des Séances de la Société de Biologie.

- a. ETTISCH, G. & GOMES DA COSTA, S. F., 1938.—“ Sur les différences de réaction des substances biologiques aux solutions aqueuses et huileuses d'un même composé.” 127 (3), 239-241.
 b. COUTELEN, F., 1938.—“ Sur la structure de la membrane prolifère des hydatides échinococciques.” 128 (23), 946-948.
 c. GALLIARD, H., 1938.—“ Evolution complète de *Filaria bancrofti* chez *Aedes (Stegomyia) aegypti*.” 128 (23), 1111-1112.

(188a) Ettisch and Gomes da Costa have carried out *in vitro* experiments on the effect of aqueous and oily solutions of benzol and thymol on pig ascaris and *Taenia serrata*. Anthelmintic action was much less marked in oily solutions than in aqueous solutions. Solutions of benzol or thymol in water were as active against ascaris as against taenia, but solutions in liquid paraffin were much more active against taenia than against ascaris.

R.H.H.

(188b) Coutelen has examined both living and fixed portions of the germinal membrane of hydatid, using a number of *intra vitam* and other stains, and has shown that the membrane is not a syncytium but a finely granular matrix in which are embedded various kinds of cellular elements with clearly defined walls. It is likely that these cells, whose structure and staining-reactions are briefly described, are differentiated from small polygonal cells, 5 to 10 μ in diameter. Sections are not suitable for this cytological study since they show clearly only the largest cells.

B.G.P.

189—Current Science.

- a. PANDE, B. P., 1938.—“ A note on *Harmostomum* sp. from an Indian toad.” 6 (11), 557-558.

* Original not available for checking or abstracting.

190—Deutsche Tierärztliche Wochenschrift.

- a. ENDREJAT, E., 1938.—“Statistisches über die Rinderfinne im Iran.” 46 (30), p. 472.
- b. SEYFARTH, M., 1938.—“Pathogene Wirkung und innerer Bau von *Paramphistomum cervi*,” 46 (33), 515-518.
- c. SCHMID, F., 1938.—“Tägliche Fragen aus der Praxis: Lungenwurm- und Magenwurmseuche.” 46 (39), 614-615.

(190a) Endrejat comments on the abundance of *Cysticercus bovis* in Iran where over 7% of 2,841 cattle were infected; this is the more remarkable since raw meat is not eaten there. Prevention is difficult in the absence of facilities for refrigeration; heavily infected carcasses are confiscated, but lightly infected ones are subjected to cooking or to three weeks pickling before sale.

B.G.P.

(190b) Seyfarth redescribes *Paramphistomum cervi* from longitudinal sections and gives an account of the histopathology of the ruminal mucosa observed in a heavily infested calf. Widespread destruction of the stratum corneum was found, with thickening and cellular infiltration in the underlying layers.

B.G.P.

(190c) Schmid discusses the following solutions to problems, relating to lung- and stomach-worm disease in cattle, which have been dealt with by his Institute (Hanover): (i) With regard to lungworm disease sheep are not a source of infection to cattle, and conversely. (ii) The sudden appearance of marked lungworm disease in cattle on a particular pasture was definitely ascribed to local road-construction which had interfered with drainage and made the pasture wet. (iii) Disease and deaths from stomach-worm, on a farm where the pastures were dry hill-slopes, was traced to an enclosed dung-heap; cattle brought in to tread the dung were picking up massive infections by eating the straw and licking the wall. The fact that control was rapidly followed by decreased infection (without treatment) indicates slight longevity in stomach-worms. (iv) Stalling and good food in autumn are the only measures to protect from stomach-worms those cattle, on wet farms in northern Germany, which are liable to the disease. On the pastures infection is set up anew each spring: there is no general carry-over of infection through the winter.

B.G.P.

191—East African Agricultural Journal.

- a. HARRIS, W. V., 1938.—“Root-knot eelworm.” 4 (1), 25-30.

(191a) Among the plants in Tanganyika noticed by Harris to be susceptible to *Heterodera marioni* are mulberry, coffee, mkweme nut (*Telfairia pedata*), tobacco, tomato, parsley, lentil, balsam and Madagascar bean. Plants which are tolerant are turnip, cabbage, nasturtium and cotton. Resistant plants are oats, sorghum, wheat, rice, sunn hemp, citrus, peach, Gaillardia and Zinnia. Varietal resistance has been discovered in soy-beans, velvet beans, cowpeas, sweet potatoes. On the whole staple native food crops are little affected. Present day knowledge regarding the life-history, identification, cultural and chemical control of *Heterodera marioni* is briefly summarized.

R.T.L.

192—Farming in South Africa.

- a. VAN DER LINDE, W. J. & GREENSTEIN, E. J., 1938.—“The Bradley-grass nematode.” **13** (149), 299-300.

(192a) Van der Linde & Greenstein give a brief account of the damage caused to Bradley grass (*Cynodon transvaalensis*), used in making lawns in South Africa, by the gall-forming nematode, *Anguillulina tumefaciens*, and also discuss a number of possible methods of control.

T.G.

193—Fischerei-Zeitung.

- a. SCHÄPERCLAUS, W., 1938.—“Die Schädigungen der deutschen Fischerei durch Fischparasiten und Fischkrankheiten.” **41** (22), 256-259; (23), 267-270.

194—Folha Medica.

- a. ALVARES CORRÊA, M. & MELLONE, O., 1938.—“Estudo sobre a postura do *Trichuris trichiura*.” **19** (12), 137-139.
- b. PESSÔA, S. B., 1938.—“Susceptibilidade e resistencia às infestações helmínticas.” **19** (16), 185-189.

(194a) From the large intestines of 30 cadavers, Alvarez Corrêa & Mellone recovered *Trichuris trichiura* in 19 cases. The adults were counted, and egg-counts were made on rectal faeces by the Stoll-Hausheer methods, from which it was calculated that there were 315 eggs per female per g. of faeces, or 200 eggs per adult worm per g. Seven of the cases, containing one or two female worms in each case, gave negative egg-counts.

B.G.P.

195—Forschungsdienst. Sonderheft.

- a. LÜDECKE, H., 1938.—“Einfluss der Nematoden auf die Nährstoffaufnahme der Zuckerrüben.” **7**, 247-255.

(195a) Lüdecke has made detailed investigations on the uptake of nitrogen, potash and phosphates by beet growing in soil infected with *Heterodera schachtii*. The results indicated that the harmful effects of eelworm invasion consisted not only in destruction of cell tissue but also in a direct extraction of plant nutrients. The uptake of sodium, calcium and magnesium was also examined and it was found that in certain concentrations of plant nutrients, notably those deficient in nitrogen or potash, there was an abnormally high uptake of sodium by the plant. Experiments over a number of years have indicated that the application of heavy fertilizer dressings to badly infected land, whilst increasing the yield of beet and beet-tops, did not lead to an increase in the cyst content of the soil in comparison with plots which received lighter dressings.

R.H.H.

196—Fukuoka-Ikwadaigaku-Zasshi.

- a. OKABE, K., 1938.—“On the second intermediate hosts of *Clonorchis sinensis* (Cobbold) in Fukuoka Prefecture.” **31** (7), 1217-1229. [In Japanese: English summary pp. 140-144.]

(196a) Forty-two species of fresh-water fishes are listed as recorded second intermediate hosts of *Clonorchis sinensis*. It is pointed out that *Ctenopharyngodon idellus*, which is about to be cultivated commercially in the Saga and Hukuoka Prefecture, has already been proved to be a very efficient intermediate host in Formosa.

R.T.L.

197—Gaceta Medica de Caracas.

- a. PERDOMA HURTADO, B., RUIZ RODRIQUEZ, J. M. & OSUNA, B. A., 1938.—“Un caso de cirrosis hipertrofica de origen bilharziano.” 45 (5), 67-69.

198—Geneeskundig Tijdschrift voor Nederlandsch-Indië.

- a. VEEN, A. G. VAN & COLLIER, W. A., 1938.—“Over het lintwormmiddel Laboe Merah (voorloopige mededeeling, tevens rondvraag).” 78 (31), 1882-1884.

(198a) The seeds of *Cucurbita Moschata* are frequently used in the region of Batavia as an anthelmintic against cestodes. Van Veen & Collier here give a preliminary account of methods for extracting the seeds with water and concentrating the active principle.

B.G.P.

199—Glasgow Medical Journal.

- a. STEVENSON, D. S. & HEGGIE, J. F., 1938.—“Echinococcus disease: hydatid cysts in lung and in liver.” 130 (1), 25-28.

200—Haematologica.

- a. LUCIA, P. DE & MORELLI, A., 1938.—“Sul valore clinico della prova di Donath e Erlsbacher nelle emopatie. Ricerche sulla interpretazione della prova stessa.” 19 (1), 49-63.

(200a) Lucia & Morelli discuss the increased tolerance for galactose claimed by Donath & Erlsbacher in cases of pernicious anaemia, and conclude that it is not characteristic of P.A., being found occasionally in other anaemias. They report 3 hookworm cases in which galactosaemia and galactosuria were observed.

B.G.P.

201—Imperial Bureau of Agricultural Parasitology (Helminthology). Publications.

- a. YOUNG, M. R., 1938.—“Helminth parasites of New Zealand. A bibliography with alphabetical lists of authors, hosts and parasites.” St. Albans, 19 pp.

202—Indian Medical Research Memoirs.

- a. IYENGAR, M. O. T., 1938.—“Studies on the epidemiology of filariasis in Travancore.” No. 30, iv + 179 pp.

(202a) Of 78,763 persons examined in Travancore, 5,056 showed manifestations of filarial disease. The disease is most extensive in the alluvial

tract along the sea-coast, but it also occurs as isolated small foci in laterite regions inland. Blood examination of 78,763 persons gave 6,138 positive for *Mf. malayi*, 3,827 positive for *Mf. bancrofti* and 64 mixed infections. Genital affections are typical of regions where *Mf. bancrofti* is prevalent, but are rare where *Mf. malayi* predominates. *Mf. malayi* infection is found mainly in the sandy coastal tracts but also in non-sandy inland areas. It is typically rural in its occurrence and is rare in towns. Its presence in a high percentage of primitive forest tribes leading a secluded life indicates that the infection is autochthonous and was not introduced from outside. These forest settlements are believed to be the original reservoirs of the infection from which it spread to other parts of the State. The distribution of *F. bancrofti* is typically urban. Although the distribution of filarial infection corresponds closely to that of filarial disease, there is no correlation between filarial disease and the presence of microfilariae in the blood.

The vectors of *Mf. malayi* were found experimentally to be *Mansonioides annulifera*, *M. uniformis*, *M. indiana*, *Anopheles barbirostris*, *A. hyrcanus* var. *nigerrimus* and *Armigeres obturbans*. Development of the larvae was completed in *M. uniformis* in $7\frac{1}{2}$ days and in 10 to 13 days in the other mosquitos. *C. fatigans* is the most important carrier of *F. bancrofti*.

Control of *Mf. malayi* infection can be effected by measures directed against *Mansonioides*, by removal of *Pistia* from water collections. Control of *F. bancrofti* required improved drainage combined with treatment of breeding places of *C. fatigans* with larvicides. J.J.C.B.

203—Japanese Journal of Zootechnical Science.

- *a. YOSHIKAWA, M., 1938.—“Experimentelle Untersuchungen über Wurmkur bei *Haemonchus contortus* (Magenwurm) der Schafe mit besonderer Berücksichtigung der Resistenz der Erwachsenen gegen verschiedene Chemikalien.” 10, 227-248.

204—Journal of Agricultural Research.

- a. CHRISTIE, J. R., 1938.—“Two distinct strains of the nematode *Aphelenchoides fragariae* occurring on strawberry plants in the United States.” 57 (1), 73-80.

(204a) Christie discusses dwarf or crimp disease of strawberry plants caused by the nematode, *Aphelenchoides fragariae*, especially in relation to time of appearance of symptoms and regional distribution in U.S.A. In the south-eastern states, Maryland to Florida, the disease appears in the summer from July to early October but further north in the region of Cape Cod, Mass., the symptoms are shown in spring. He adduces experimental evidence that the two diseases are caused by two distinct physiological races of *A. fragariae*. T.G.

205—Journal of Agricultural Science.

- a. MANN, H. H., 1938.—“Investigations on clover sickness.” 28 (3), 437-455.

(205a) Mann presents the results of a series of experiments, conducted over a period of 6 years, on clover sickness which he defines as the incapacity

* Original not available for checking or abstracting.

of a given soil to produce a properly sized plant of clover. He shows that this condition of the soil is independent of fungal disease and of the stem eelworm *Anguillulina dipsaci* and that it can be temporarily removed by heating the soil in a moist condition at 60°-70°C. for 2 hours or by the addition of large amounts of farmyard manure. The experiments show that what is considered as clover sickness, in this agricultural sense, may be accompanied by attack by the stem eelworm but that it can be distinguished from the latter and, in fact, is independent of it. T.G.

206—Journal of the American Medical Association.

- a. HARE, C. C., 1938.—“*Cysticercus cellulosae* of the brain.” 111 (6), 510-515.
- b. HOYNE, A. L. & WOLF, A. A., 1938.—“Trichinosis: a report of trichinae in vocal cords of a patient with diphtheria.” 111 (8), 701-702.

(206a) Two cases of brain invasion with *Cysticercus cellulosae* are reported from New York. In one the parenchyma and fourth ventricle were involved, in the other there was chronic basilar leptomeningitis, and a cysticercus was found in the fourth ventricle. Details of both cases are given. R.T.L.

(206b) Hoyne & Wolf report the case of an infant aged 11 months, in whom encysted *Trichinella* were found post mortem in the vocal chords; a photomicrograph shows the cysts to have thick walls, but the possible mode of infection is not discussed. V.D.V.S.

207—Journal of the American Veterinary Medical Association.

- a. BILD, C. E., 1938.—“The treatment of heart-worm infestation.” 93 (3), 179-184.

(207a) Bild discusses heart worm in dogs from the clinical aspect. The direct smear examination of blood from any of the external leg veins is satisfactory and accurate for diagnosis. Before treatment it is advisable to check the patient carefully, and if there is no sign of toxæmia or internal parasitism, commence treatment after one week's rest with small daily intravenous injections, and increase the dose gradually. The reactions that may be encountered during treatment are described and recommendations given. J.W.G.L.

208—Journal of the Chemical Society. London.

- a. PAGET, H., 1938.—“Chenopodium oil. Part III. Ascaridole.” pp. 829-833.

(208a) Paget has carried out work on the chemistry of ascaridole, the anthelmintic constituent of chenopodium oil. Ascaridole was obtained in crystalline form by cooling to about -20°. The reduction of ascaridole, and of dihydroascaridole, by titanous chloride led to complex mixtures of products, some of which were estimated quantitatively. R.H.H.

209—Journal of Economic Entomology.

- a. FICHT, G. A., 1938.—“Two years of study of the effects of root nematode on the yield of canning tomatoes.” 31 (4), 497-506.

(209a) Ficht describes the results of experiments in 1936 and 1937 to determine the effects of *Heterodera marioni* on the yield of canning tomatoes. Nematode infestation was found to produce definite adverse effects in the percentage of replanting necessary, size of fruit, total yield and resistance to other diseases. Some varieties showed greater damage than others; 6½ tons per acre decrease in yield was shown in one case. Premature death of the plant was accompanied by premature ripening, thus reducing the loss by increasing the proportion of Grade I canning tomatoes in one instance. An experiment on overwintering the nematode out-of-doors in northern Indiana gave negative results.

M.J.T.

210—Journal of the Egyptian Medical Association.

- a. KHALIL, M., 1938.—“The site of the adult filaria in the human-body is the determining factor in the microfilaria being periodic or non-periodic even in the same species.” 21 (8), 502-505.
- b. KHALIL, M., 1938.—“Microfilariae disappear into the lymphatics when absent in the peripheral blood.” 21 (9), 595-596.
- c. KHALIL, M., 1938.—“Thermotropism in filariasis: the basis of the clinical and pathological manifestations and the rational methods of treatment.” 21 (9), 597-602.
- d. ASHKAR, M. F., 1938.—“Treatment of schistosomiasis with Anthiomaline. (A preliminary report).” 21 (9), 614-619.

(210a) Differences in habitat of adult *Filaria bancrofti* are determined by the biting habit of the mosquito intermediary. *Culex fatigans* and *C. pipiens* bite the lower extremities especially in the early evening while *Aedes* or *Stegomyia* bite the hands and upper extremities during the day. The resulting adult worms remain in the local lymphatics. The microfilariae from the upper limbs quickly reach the blood stream. Those from the lower limbs accumulate in the lymphatics during the day and are carried to the blood-stream via the thoracic duct when the body is in a recumbent position and when there is an increase in the flow of chyle after digestion. These facts are used by Khalil as a basis for a new explanation of filarial periodicity both in *F. bancrofti* and *Loa loa*.

R.T.L.

(210b) When microfilarial counts on the peripheral circulation are compared with counts on venous blood taken at the time, it is apparent that the capillaries offer distinct resistance to the passage of microfilariae of the size of those of *F. bancrofti*. Those that are unable to pass the capillaries escape into the lymphatic spaces and again reach the blood stream at a time determined by the lymph flow and posture in man. This tends to accentuate nocturnal periodicity as the thoracic duct drains the major part of the body.

R.T.L.

(210c) Khalil points out that the adults of various species of filarial worms are definitely thermotropic and that this reaction has been used to induce adult worms to migrate out of pathological tissues. It affords also, according to Khalil, a clue to the migrations of the adult *Filaria bancrofti*.

Patients with periodical lymphangitis get absolute relief in a colder climate and also benefit by the local application of cold. Khalil discusses the general allergic nature of lymphangitis and other forms of filariasis, in relation to bacterial infection—which may be either primary or secondary to the filarial infection. R.T.L.

(210d) Ashkar gave Anthiomaline, i.e., lithium antimony thiomalate, intramuscularly to 20 uncomplicated cases of urinary bilharziasis. Five cases showed toxic symptoms. These were slightly more marked than with Fouadin. Seven cases were negative one month later. R.T.L.

211—Journal of Helminthology.

- a. BUCKLEY, J. J. C., 1938.—“On *Culicoides* as a vector of *Onchocerca gibsoni* (Cleland & Johnston, 1910).” 16 (3), 121-158.
- b. GOODEY, T., 1938.—“Observations on the destruction of the stem eelworm, *Anguillulina dipsaci*, by the fungus *Arthrobotrys oligospora* Fres.” 16 (3), 159-164.
- c. MORGAN, D. O. & WILSON, J. E., 1938.—“Observations on the helminth parasites of poultry in Scotland.” 16 (3), 165-172.
- d. LEIPER, J. W. G., 1938.—“The longevity of *Fasciola hepatica*.” 16 (3), 173-176.
- e. SMEDLEY, E. M., 1938.—“Experiments to determine the relative toxicity of ammonium chloro-acetate and related chemicals to the potato eelworm (*Heterodera schachtii*).” 16 (3), 177-180.

(211a) Buckley found an experimental infection rate of 0.96% in *Culicoides pungenis* which had fed on *O. gibsoni* infected cattle in Kuala Lumpur, F.M.S., which, compared with the natural infection rate of 0.35% in this species, is statistically significant; and it is concluded from this result and other experimental data that this species is a vector of *O. gibsoni*. *C. oxystoma*, *C. shorti* and *C. orientalis* are also said to be vectors. About 12 other species of *Culicoides* and 2 species of *Lasiohelea* were worked with. Observations were made on the distribution of *O. gibsoni* microfilariae in the skin of cattle. The technique of handling the midges, very large numbers of which were dissected, is described. The breeding places of a few of the species were found. J.J.C.B.

(211b) Goodey describes the occurrence of the nematode-destroying fungus, *Arthrobotrys oligospora*, in the tissues of 2 host plants parasitized by the stem eelworm, *Anguillulina dipsaci*. In both cases the nematode parasite was attacked and destroyed by the fungus whilst within the plant. The author discusses the mode of entry of the fungus into the plant and its possible significance in the biological control of the nematode. T.G.

(211c) Morgan & Wilson list the helminth parasites found during their examination of over 1,000 fowls in Scotland and add data on the intensity of the infestations and seasonal incidence. The survey showed that birds suffering from tuberculosis, particularly those in an advanced stage, harboured very few worms but no relationship was observed between other diseases, such as fowl paralysis, and the level of the helminth infestation. D.O.M.

(211d) Goats, experimentally infected on a single occasion with *Fasciola hepatica* cysts, were passing viable *F. hepatica* eggs in large numbers 4 years, 9 months and 12 days after the original infection. R.T.L.

(211e) Chloro-acetic acid and various water soluble chloro-acetates have, in the laboratory, a markedly toxic effect on the larvae and cysts of *Heterodera schachtii*. Ammonium chloro-acetate appears to be the most effective. R.T.L.

212—Journal of the Iowa State Medical Society.

- *a. STAHR, R., 1938.—“Unusual symptoms due to round-worm infestation.” 28, 99-102.

213—Journal of Parasitology.

- a. KOURÍ, P. & NAUSS, R. W., 1938.—“Formation of the egg shell in *Fasciola hepatica* as demonstrated by histological methods.” 24 (4), 291-310.
- b. MOORTHY, V. N., 1938.—“*Spinitectus corti* n. sp. (Nematoda: Spiruridae).” 24 (4), 319-322.
- c. MOORTHY, V. N., 1938.—“Observations on the life history of *Camallanus sweeti*.” 24 (4), 323-342.
- d. BRACKETT, S., 1938.—“Description and life history of the nematode *Dracunculus ophidensis* n. sp., with a redescription of the genus.” 24 (4), 353-361.
- e. OLIVIER, L. & ODLAUG, T. O., 1938.—“*Mesocercaria intermedia* n. sp. (Trematoda: Strigeata) with a note on its further development.” 24 (4), 369-374.
- f. MOORTHY, V. N., 1938.—“*Capillaria* infection in fish.” 24 (4), 375-377.
- g. REYNOLDS, B. D., 1938.—“Metacercariae of a species of *Brachylaemus*, probably *B. virginianus*, from *Agriolimax agrestis*.” 24 (4), 377-378.

(213c) A detailed description is given of the different developmental stages of *Camallanus sweeti* in naturally infected cyclops. It is suggested that a fresh-water fish, e.g., *Barbus puckelli*, is necessary. Fresh bile kills infected cyclops and activates the encysted *Camallanus* larvae. R.T.L.

(213d) The genus *Dracunculus* is redescribed. Six species are considered valid including *D. ophidensis* n. sp. from the garter snake *Thamnophis sirtalis*. The larvae of *D. ophidensis* develop in *Cyclops viridis*, reaching the infective stage in 12 to 15 days. Snakes were infected by feeding them with infected cyclops. Tadpoles act as “transfer hosts” but no development takes place in them. R.T.L.

(213e) Olivier & Odlaug describe *Mesocercaria intermedia* n. sp. occurring free and encysted in the muscles and peritoneum of tadpoles and adults of *Rana pipiens*, and in fatty tissue of the snake *Thamnophis sirtalis*. Specimens from 4 separate host animals showed significant differences in size, showing that size alone is not a reliable character in diagnosis. The worms resemble closely *M. marcianae* and the mesocercaria of *Alaria mustelae*, and are best distinguished by the extent of spination, position and number of the penetration glands, and especially by the structure of the excretory system. In the new species there are 5 groups of 8 flame cells on each side,

* Original not available for checking or abstracting.

and the posterior main collecting tube has 3 groups of cilia. Specimens have been fed to rats, producing metacercariae which became adults of the genus *Alaria* in the intestine of cats. E.M.S.

(213f) Capillarid larvae have been discovered in 3 species of fish used in the biological control of dracontiasis in Mysore. The worms are all third stage larvae, suggesting a copepod first intermediate host, and a predacious fish, bird or turtle definitive host. E.M.S.

(213g) Reynolds reports 3 metacercariae, probably of *Brachylaemus virginianus*, from a snail of the species *Agriolimax agrestis*. There being no other stages present, the larvae are presumed to have been picked up in slime or by contact with the first host. It is not stated whether they were encysted in the snail. E.M.S.

214—Journal of Pharmacology and Experimental Therapeutics.

- a. NEALE, R. C. & WINTER, H. C., 1938.—“Identification of the active crystalline substance from liver which protects against liver damage due to chloroform or carbon tetrachloride; and a study of related compounds.” 62 (2), 127-148.

(214a) Neale & Winter have isolated from aqueous liver extracts, a crystalline substance which protects the liver from degenerative changes following treatment with chloroform or carbon tetrachloride. The substance was identified as sodium xanthine. Experiments to determine the effective dose of this compound were carried out on albino rats weighing 80 to 120 g. It was found that 100 mg. of sodium xanthine injected daily for 2 days prior to the administration of carbon tetrachloride or chloroform, afforded protection against the toxic action of these drugs on the liver. Other purine derivatives were tried and in some cases found to be protective agents.

R.H.H.

215—Journal of the Philippine Islands Medical Association.

- a. SISON, A. B. M. & TOLENTINO, D. G., 1938.—“Hypochromic anemia secondary to multiple parasitism.” 18 (6), 353-357.

216—Journal of the Public Health Association of Japan.

- a. MINAMIZAKI, Y., 1938.—“A study of the viability of hookworms in the intestine.” 14 (3), 1-6.

(216a) Minamizaki infected himself with hookworm by walking barefoot on land known to contain larvae. The first appearance of eggs in the stool occurred 58 days afterwards and they continued for 7 years. A second infection, 3 months after the first, resulted in a sudden increase in egg production after 50 days. Vermicidal measures in the early months resulted in the passing out of a few worms, the others being untouched. P.A.C.

217—Journal of Science of the Hiroshima University. Series B, Division I. Zoology.

- a. OGURO, Y., 1938.—“A new blood fluke *Amphiorchis lateralis* nov. sp. (Spirorchidae) found in a marine turtle in Japan.” 6, 1-4.

218—Journal of the South-Eastern Agricultural College. Wye.

- a. JARY, S. G., 1938.—“A new host record for *Anguillulina dipsaci* Kuhn 1858.” No. 42, pp. 64-65.

(218a) Jary reports the presence of the stem eelworm, *Anguillulina dipsaci*, on *Cheiranthus mutabilis* var. “Old Cottage,” a new host for this parasite. The account is illustrated by a photograph of an affected plant showing densely clustered small leaves.

T.G.

219—Journal of Tropical Medicine and Hygiene.

- a. CASTELLANI, A. & ACANFORA, G., 1938.—“Brief notes on cysticercosis and luetic pseudocysticercosis.” 41 (13), 213-217.
 b. CAWSTON, F. G., 1938.—“Favourite sites of schistosomes and a consideration of their destruction in stock.” 41 (18), 293-294.

(219a) Castellani & Acanfora describe a fatal case of cysticercosis in which cysts were extremely numerous in all the skeletal muscles, subcutaneous tissues, heart and brain, and they redescribe a case of pseudo-cysticercosis with nodules on the fasciae of the limb muscles. Diagnosis of the latter condition is by biopsy revealing a fibrous nodule, by a positive Wassermann test, and by disappearance of the nodules after antiluetic treatment.

B.G.P.

220—Lingnan Science Journal.

- a. WU, L. Y., 1938.—“Parasitic trematodes of tree sparrows, *Passer montanus taivanensis* Hartert, from Canton, with a description of three new species.” 17 (3), 389-394.
 b. KOO, S. Y., 1938.—“A new species of *Pharyngodon* (Nematoda : Oxyuridae) from Canton lizard, *Gekko gekko*, with remarks on the evolution of the group.” 17 (3), 395-400.

(220a) Wu describes *Philophthalmus ocularae* n. sp. from the ocular cavity, *Leucochloridium muscularae* n. sp. from the rectum, *L. passerii* n. sp. location not stated, and *Prosthogonimus querquedulae* Yamaguti from the rectum of *Passer montanus taivanensis*.

E.M.S.

221—Meddelelser fra Statens Forsøgsvirksomhed i Plantekultur, Kjøbenhavn.

- a. ANON, 1938.—“Kløveraal og Lucerneaal.” No. 109, 4th Edit., 4 pp.

(221a) The anonymous author of this agricultural leaflet briefly describes the chief symptoms of attack by the stem-eelworm, *Tylenchus dipsaci*, on red clover, white clover and lucerne. Methods of dispersal of the parasite are discussed and general recommendations as to rotation of crops, as control measures, are given.

T.G.

222—Medical Parasitology and Parasitic Diseases.

- a. SKRJABIN, K. I., 1938.—“*Echinostoma paraulum*—nouveau parasite de l'homme.” 7 (1), 129-138. [In Russian.]
- b. MIRONOVA, M. N., 1938.—“Sur la propagation de l'*Opisthorchis* parmi la population de la région de Dniépropetrovsk. (Communication préalable).” 7 (1), 139-140. [In Russian: French summary p. 140.]
- c. URIN, A. G., 1938.—“Cas de la colite spastique à la suite de la strongyloïdose.” 7 (1), 141-142. [In Russian: French summary p. 142.]
- d. KALANTARJAN, E. V., 1938.—“Utilisation du nitrate de sodium dans la pratique helminthologique.” 7 (1), 142-143. [In Russian: French summary p. 143.]
- e. KORIAZHNOV, V. P., 1938.—“Observations sur la trichinellose.” 7 (2), 258-259. [In Russian: French summary p. 259.]
- f. POKROVSKY, S. N. & ZIMA, G. G., 1938.—“Mouches comme transporteurs des oeufs des helminthes dans les conditions naturelles.” 7 (2), 262-264. [In Russian: French summary p. 264.]

(222a) *Echinostoma paraulum* Dietz, 1909, normally a parasite of duck, goose and fowl, is recorded for the first time as a parasite of man by Skrjabin, and the species is redescribed. The family Echinostomatidae is reviewed and a key is provided for 14 subfamilies, 4 of which are new, viz., Pegosomatinae, Cotylotretinae, Stephanoproraoidinae and Sodaliinae.

J.J.C.B.

(222b) Six out of 120 patients with bilious complaints were found to be infected with *O. felineus*, and these gave a history of fish-consumption. They had never been in Siberia and the infection is believed to be of local origin.

J.J.C.B.

(222d) Kalantarjan recommends the use of a saturated solution of sodium nitrate (specific gravity 1.4) for concentrating helminth eggs by the flotation method. The faeces are mixed with 10 times their volume of the solution and then strained through a fairly coarse gauze. After 10 to 15 minutes the surface film is removed and examined. Eggs with a high specific gravity, such as *Ascaris lumbricoides* (unfertilized), *Taenia saginata*, *T. solium*, *Fasciola hepatica* and *Dicrocoelium lanceatum* which do not rise to the surface of a saturated solution of common salt, will rise to the surface of the NaNO_3 solution.

J.J.C.B.

(222e) After feeding a series of rats with trichinous swine-flesh, Koriazhnov found that virulence decreased markedly after the 4th passage. After the 5th passage parasites were found in very small numbers in the diaphragm only in one case, and in the other 2 cases were entirely absent.

A.E.F.

(222f) As a result of their observations Pokrovsky & Zima show that flies transmit ova of *Hymenolepis*, *Enterobius*, *Diphyllobothrium* and (more rarely) *Ascaris*. Among the species of flies examined *Sarcophaga* and *Calliphora* were most frequently infected, and 0.47% of flies caught in shops were infected. The importance of the control of flies in the prophylaxis of helminthiasis is stressed.

A.E.F.

223—Medizinische Klinik.

- a. FRIEDRICH, H., 1938.—“Die Diagnose des *Echinococcus alveolaris* (infiltrierend wachsender Echinokokkus); keine extrem seltene, sondern fast immer verkannte Erkrankung.” 34 (37), 1220-1222.

224—Mémoires de la Société Neuchâteloise des Sciences Naturelles.

- a. DUBOIS, G., 1938.—“Monographie des Strigeida (Trematoda).” 6, 1-535.

(224a) In this important monograph, Dubois reviews our knowledge of the homogeneous trematode group known as the Strigeida. The work gives systematic descriptions of the 247 known species which fall into 62 genera and form 6 families. The text is illustrated by 354 text figures. There is an alphabetical list of hosts and a comprehensive bibliography. The new systematic units described are Cyathocotylidi, Prohemistomidi, Prohemistomini, Prosostephanini, Szidatinae, Szidatini, Gogateini and the new genus *Szidatia* with *S. joyeuxi* (Hughes, 1929) as type and only species. This genus is differentiated from *Gogatea* Lutz by the disposition of the yolk glands. Sixteen species are suppressed. The larval forms of 34 species are described under their respective adults.

R.T.L.

225—Mitteilungen aus den Grenzgebieten der Medizin und Chirurgie.

- a. SCHACHNER, A., 1938.—“Ein Beitrag zur Kenntnis der Appendicopathia verminosa.” 45 (1), 93-99.

226—Nederlandsch Tijdschrift voor Geneeskunde.

- a. WEERSMA, M., 1938.—“Echinococcus in het centrale zenuwstelsel.” 3 (30), 3662-3666.

227—New York State Journal of Medicine.

- a. RAGGI, A. J., 1938.—“Echinococcosis of the pelvis. Report of a case involving the right broad ligament.” 38 (1), 29-30.

228—North American Veterinarian.

- a. HARWOOD, P. D., UNDERWOOD, P. C. & SCHAFFER, J. M., 1938.—“Treatment of equine strongylidosis with n-butyl chloride. (Preliminary note).” 19 (7), 44-46.
 b. KEMPER, H. E., 1938.—“Filarial dermatosis of sheep.” 19 (9), 36-41.
 c. COON, E. W. et al., 1938.—“Sulfanilamide as a treatment for salmon poisoning in dogs.” 19 (9), 57-59.

(228a) N-butyl chloride as an anthelmintic was tried out on 3 horses given in 8 to 10 times its volume of linseed oil after an 18 to 24 hour fast. 0.1 c.c. per lb. body-weight was found to be 99% and 100% effective against cylicostomes, and 74% and 100% effective against *Strongylus* spp. in the 2 horses tested. In another horse 0.75 c.c. per lb. body-weight was 95% effective for cylicostomes. These doses caused no symptoms

other than temporary loss of appetite and slight skunk-like odour of the breath, but 2 other horses were given 1 c.c. n-butyl chloride per lb. body-weight and they died after a few days, presumably from a toxic dose. J.W.G.L.

(228b) An account of filarial dermatosis in sheep caused by *Elaeophora schneideri* in Catron County, New Mexico, is given by Kemper. This disease, commonly called "sore head," only occurs in ewes 2 to 6 years old. The symptoms and lesions are described. The recovery of microfilariae from the lesions on the head, leg and belly, and of adult parasites from the blood vessels of affected sheep is recorded. Local treatment was ineffective, but Fouadin in daily doses of 4 c.c. intramuscularly was found to be specific when at least 88 c.c. had been administered. J.W.G.L.

(228c) Salmon poisoning in dogs is diagnosed by loss of appetite, high temperature, rapid loss of weight, and inactivity. Cases are usually brought to the hospital 9 to 12 days after eating fish parasitized with the vector *Trogloctrema salmincola*. Successful treatment was accomplished by the dosing of 1 to 3 grains of sulphanilamide per lb. body-weight each day, given as 1, 2 or 3 doses per day over a period of 2 to 12 days; there were 38 recoveries out of 43 cases. Experimentally infected animals were also treated and the controls revealed the effectiveness of this treatment. J.W.G.L.

229—Novitates Zoologicae.

- a. ROTHSCCHILD, M., 1938.—"*Cercaria sinitzini* n. sp., a cystophorous cercaria from *Peringia ulvae* (Pennant 1777)." 41 (1), 42-57.

230—Okayama-Igakkaï-Zasshi.

- a. MIYAZIMA, T., 1938.—"On the anaerobic metabolism of the *Ascaris lumbricoides*." 50 (7), 1373-1384. [In Japanese: English summary pp. 1373-1374.]
- b. NISHIZAKI, B., 1938.—"Experimentelle Untersuchung über den harnsäurespaltenden Vorgang in der Leber bei den an Schistosomiasis japonica erkrankten Kaninchen." 50 (7), 1418-1423. [In Japanese: German summary p. 1418.]

(230a) Miyazima presents evidence to support the view that the metabolism of *Ascaris lumbricoides* is largely a fermentative process. The addition of monoiodoacetic acid to the medium containing the worms did not affect the ratio of O₂ consumed to CO₂ produced. For a given amount of O₂ consumed, the amount of CO₂ produced by *Ascaris lumbricoides* was always greater than that produced by earthworms. R.H.H.

(230b) Nishizaki has carried out experiments on the uricolytic process of the livers of normal rabbits, and of rabbits infected with *Schistosoma japonicum*. 100 mg. of uric acid were mixed with 15 g. of minced liver from normal rabbits and kept aerated for 4 hours at 38° C. and pH 7.4. The yield of allantoin was 102.2 to 113.1 mg. Under similar conditions, but with livers from infected rabbits, the yield of allantoin was only 25.0 to 37.6 mg. R.H.H.

231—Onderstepoort Journal of Veterinary Science and Animal Industry.

- a. VAN DER WESTHUYSEN, O. P., 1938.—“A monograph on the helminth parasites of the elephant.” 10 (1), 49-190.

(231a) This synopsis of all the known parasites of Indian and African elephants augments the known descriptions of certain structures and amends the diagnosis of some of the genera. The list of nematode species totals 50 belonging to 13 genera. The Strongyloidea is represented by 6 genera and 35 species, of which 23 parasitize the African elephant and 12 the Indian elephant. Of the Ancylostomidae there are 3 genera with 7 species, of which 3 occur in the African elephant and 4 in the Indian elephant. The Syngamidae is represented by a single Indian species. There is a marked host specificity for no one species occurs in both India and Africa. In all the species of the genera *Murshidia* and *Decrusia* a second leaf-crown was observed. At the base of the buccal capsule in many species numerous small teeth-like tubercles were noted for the first time. Extreme variations are recorded in many species, especially in the bursal rays and in the female tail. Two new species *Chomangium magnostomum* and *Gramnocephalus hybridatus* are recorded from the Indian elephant. 266 figures, mostly original, accompany the text.

R.T.L.

232—Orvosi Hetilap.

- a. VÉGHÉLYI, P., 1938.—“Bélparaziták a gyermekkorban.” 82 (1), Suppl. pp. 3-4.
 b. MOSONYI, A., 1938.—“Az ankylostomiasis tünettanához.” 82 (13), 294-296.
 c. BENKOVICH, G., 1938.—“Echinococcus a gerinchen.” 82 (23), 563-566.
 d. REMETEI, F. F., 1938.—“Echinococcus multiplexről.” 82 (31), 766-767.
 e. MAKARA, G., 1938.—“Ankylostomiasis.” 82 (36), Suppl. pp. 141-142.

(232a) [Intestinal parasites of children.]

(232b) [The symptomatology of ancylostomiasis.]

(232c) [Hydatid of the spine.]

(232d) [Multilocular hydatid.]

233—Philippine Journal of Science.

- a. VAZQUEZ-COLET, A. & AFRICA, C. M., 1938.—“Determination of the piscine intermediate hosts of Philippine heterophyid trematodes by feeding experiments.” 65 (4), 293-302.

(233a) In connection with the recent findings of cardiac heterophyidiasis in man in the Philippines, Vazquez-Colet & Africa have examined large numbers of fish which might be implicated as second intermediaries and have identified any metacercariae found by feeding them to cats and dogs or (less satisfactorily) to mice and rats. In this way 9 species of Heterophyidae have been identified, including the heart-infesting *Diorchitrema pseudocirrata*

and *Monorchotrema yokogawai*: both encyst in *Mugil* sp., and the latter also in 4 other fishes. An interesting feature of the research is that the 6 species of fish implicated are all marine, though 2 of them also visit fresh waters.

B.G.P.

234—Phytopathology.

- a. CHRISTIE, J. R., 1938.—“Pathogenicity of culture-reared specimens of the bud-and-leaf nematode and the susceptibility of different strawberry varieties.” 28 (8), 587-591.

(234a) Christie reports the production of dwarfing symptoms on strawberry plants inoculated with *Aphelenchoides fragariae* which had been under continuous cultivation on an agar medium for several months. In one experiment 38 different varieties of strawberries were experimentally inoculated with culture-reared specimens and in each case one or more plants of each variety developed typical symptoms of dwarf, though the severity of the symptoms varied considerably in different varieties.

T.G.

235—Policlinico (Sezione Pratica).

- a. GRASSI, A., 1938.—“Rara localizzazione di una cisti d'echinococco del fegato.” 45 (33), 1517-1518.

236—Prensa Médica Argentina.

- a. CIEZA RODRIGUEZ, M. & BACH, E. V., 1938.—“Obstrucción intestinal por quiste hidatídico.” 25 (4), 181-185.
- b. MILLAN, J. M. & NESPOLO, J. F. V., 1938.—“Obstrucción traqueal por áscaris.” 25 (22), 1070-1072.
- c. IVANISSEVICH, O., 1938.—“Las exposiciones de hidatidología.” 25 (24) p. 1164.

237—Proceedings of the Helminthological Society of Washington.

- a. PORTER, D. A., 1938.—“On the occurrence of *Gongylonema verrucosum* in sheep and cattle in the United States.” 5 (2), 41-42.
- b. BYRD, E. E. & DENTON, J. F., 1938.—“Two new trematode parasites of the genus *Styphlodora* (Plagiorchiidae: Styphlodorinae) from the gall bladder of a water-snake, with a discussion on the systematics of the subfamily.” 5 (2), 42-46.
- c. McINTOSH, A., 1938.—“A new philophthalmid trematode of the spotted sandpiper from Michigan and of the black-necked stilt from Florida.” 5 (2), 46-47.
- d. PRICE, E. W., 1938.—“A new species of *Dactylogyrus* (Monogenea: Dactylogyridae), with the proposal of a new genus.” 5 (2), 48-49.
- e. TYLER, J., 1938.—“Egg output of the root-knot nematode.” 5 (2), 49-54.
- f. DIKMANS, G., 1938.—“A consideration of the nematode genus *Citellinema* with description of a new species, *Citellinema columbianum*.” 5 (2), 55-58.
- g. WEHR, E. E., 1938.—“New genera and species of the nematode superfamily Filarioidea. I. *Serratospiculum amaculata* n. sp.” 5 (2), 59-60.
- h. HARWOOD, P. D. & LUTTERMOSER, G. W., 1938.—“The influence of infections with the tapeworm, *Raillietina cesticillus*, on the growth of chickens.” 5 (2), 60-62.

- i. SPINDLER, L. A., 1938.—"Persistence of swine lungworm larvae in earthworms." 5 (2), p. 63.
- j. THORNE, G., 1938.—"Notes on free-living and plant-parasitic nematodes. IV." 5 (2), 64-65.
- k. FREITAS, J. F. TEIXEIRA DE, LENT, H. & ALMEIDA, J. LINS DE, 1938.—"*Aspiculuris caviellae*, a new name for *Aspiculuris schulzi* Freitas, Lent and Almeida, 1937, preoccupied." 5 (2), p. 65.
- l. CHRISTIE, J. R., 1938.—"A redescription of *Thelastoma robustum* Leidy with comments on other species of the nematode family Thelastomatidae." 5 (2), 65-67.
- m. CHITWOOD, B. G., 1938.—"Further studies on nemic skeletoids and their significance in the chemical control of nemic pests." 5 (2), 68-75.

(237a) Porter reviews the literature on *Gongylonema verrucosum*, giving the records of findings according to hosts and locality with special reference to the United States. The author records this parasite in sheep from Florida and in cattle from Georgia, Florida, Mississippi and Alabama. The rumen appeared to be the normal habitat, but the reticulum and omasum were occasionally found to harbour the worms. J.W.G.L.

(237b) Byrd & Denton describe *Styphlodora magna* n. sp., and *S. natricis* n. sp., from the gall-bladder of *Natrix sipedon sipedon*. The two descriptions are based on only 3 specimens. E.M.S.

(237c) McIntosh describes *Cloacitrema michiganensis* n. sp., of which 2 specimens were recovered from *Actitis macularia* in Michigan, and one from *Himantopus mexicanus* in Miami. The species is the second of the genus. E.M.S.

(237d) Price describes *Dactylogyrus moorthyi* n. sp. from the gills of *Puntius puckelli* and *P. ticto*, two fresh-water fishes collected in India. *Neodactylogyrus* n.g. is proposed for the 45 or so species in which the haptor hooks are supported by two bars, *Dactylogyrus* being retained for the 27 species possessing a single bar. E.M.S.

(237e) Tyler describes a greenhouse experiment to determine the egg-output of *Heterodera marioni*, using a range of host plants. Counts of more than 500 eggs were found to be common; the highest count recorded was 2,882 by a female which showed no signs of approaching exhaustion. Counts of over 500 eggs from young females are reported from 2 resistant plants, wheat and Sudan grass. Great variation in the rate of egg-laying was found at different periods. M.J.T.

(237f) Dikmans redescribes the genus *Citellinema*, in which he includes *Warrenius*, parasites of various squirrels. He notes the presence of pre-bursal papillae in certain specimens of *Citellinema bifurcatum*. The material already described he thinks can all be accommodated in 2 species—*C. bifurcatum*, the type species, and *C. quadrivittati*. He proceeds to describe *C. columbianum* n. sp. from *Citellus columbianus* and says it "differs from *Citellinema bifurcatum*, the only other member of the genus, in the markedly greater length of the spicules." P.A.C.

(237g) *Serratospiculum amaculata* n. sp. is described from the connective tissue of the thoracic and abdominal cavities of *Falco mexicanus mexicanus* and *F. peregrinus anatum* in U.S.A. R.T.L.

(237h) Harwood & Luttermoser believe that the presence of *Raillietina cesticillus* has an injurious effect on chickens when judged by the increase in weight and growth. In the absence of manganese from the diet the effect was even more marked. P.A.C.

(237i) Spindler found that 69% of 348 swine from the southeastern part of the United States, examined between September 1929 and August 1931, were infested with lungworms. The examination of 75 adult earthworms, collected from a farm where no pigs had been kept for approximately 4 years, showed that 35 contained lungworm larvae. These larvae were fed to a susceptible pig and set up infection showing that land can remain infected for 4 years. For the control of lungworm in pigs temporary pastures are advocated. J.W.G.L.

(237j) Thorne describes and figures a new cephalobid nematode, *Panagrellus pycnus* n. g., n. sp. from some slime occurring on cottonwood, *Populus sargentii*. He also changes the names *Stegella incisa* to *Stegellata incisa* n. comb., and *Dorylaimus truncatus* to *Dorylaimus cobbi* nom. nov. T.G.

(237l) Christie redescibes the detailed morphology of both sexes of *Thelastoma robustum* from specimens removed from the posterior end of the alimentary tract of larvae of the scarabaeid, *Osmoderma scabra*, collected at New Boston, New Hampshire, and of *Xyloryctes satyrus* collected at Falls Church, Virginia, U.S.A. Christie is of the opinion that *T. myolabiatum* is a synonym of *T. labiatum* which, of the known species of *Thelastoma*, appears to be the most closely related to *T. robustum*, but from which it differs in head characters. From a study of additional material the author concludes that *T. papilliferum* is a synonym of *T. macramphidum*; the latter species very closely resembles *T. alatum* but does not possess alae in front of the anal region in the male as does *T. alatum*. The author's *Aorurus subcloatus* is identical with, and becomes a synonym of, *A. agile*. J.N.O.

(237m) Chitwood has investigated the chemical nature of the cuticles of eggs and adults of several nematodes. Detailed studies were made of the egg shells of *Ascaris lumbricoides*, *Diectophyme renale*, *Heterodera marioni* and *Ditylenchus dipsaci*. It was found in general that the same morphological layer in different nematodes or their eggs gave the same chemical reactions. Particular attention is drawn to the function of a "lipoidal" membrane which forms a vitelline membrane in the egg and a thermolabile membrane in the larva or adult. This membrane is regarded as the regulator of permeability and it is therefore suggested that nematocides which are intended to pass through the membrane should be soluble in, dissolve, or be dissolved by lipoids. R.H.H.

238—Proceedings of the National Academy of Sciences, India.

- a. DAYAL, J., 1938.—"On a new species of the genus *Astiotrema* Looss, 1901, from the intestine of a fresh water fish, *Clarias batrachus* (from Lucknow)." 8 (1), 10-14.
- b. ABDUSSALAM, M., 1938.—"On the occurrence of *Skrjabinema ovis* (Skrjabin, 1915) in India." 8 (1), 15-17.

(238a) Dayal describes *Astiotrema dassia* n. sp. from the intestine of *Clarias batrachus* and gives a key to separate the 12 known species of the genus. The new species most nearly resembles *A. indica* Thapar. E.M.S.

239—Proceedings of the Royal Society of Medicine.

- a. FAIRLEY, N. H., 1938.—“Metazoal immunity.” 31 (11), 1291-1298.

240—Proceedings of the Zoological Society of London. Series A. General and Experimental.

- a. FENWICK, D. W., 1938.—“The oxygen consumption of newly-hatched larvae of *Ascaris suum*.” 108 (1), 85-100.

(240a) Fenwick has carried out experiments on the O_2 uptake of newly-hatched larvae of *Ascaris suum*. The consumption of O_2 was low during the first half hour, very high during the next hour, and then continued at a steady low rate. The author interprets the results of these 3 phases as being due, firstly to the settling down of the larvae, secondly to the satisfaction of an O_2 debt incurred during the previous anaerobic existence of the larvae, and finally to normal aerobic metabolism.

R.H.H.

241—Proceedings of the Zoological Society of London. Series B. Systematic and Morphological.

- a. WOODLAND, W. N. F., 1938.—“On the species of the genus *Duthiersia* Perrier, 1873 (Cestoda).” 108 (1), 17-36.

(241a) The genus *Duthiersia* is provisionally divided into 7 species, 5 of which are new, viz., *D. crassa* n. sp. from *Varanus monitor*, *D. venusta* n. sp. from *V. monitor* and *V. salvator*, *D. sarawakensis* n. sp. from *V. salvator*, *D. robusta* n. sp. from *V. niloticus*, and *D. latissima* n. sp. from *V. exanthematicus*. Four species are Asiatic forms and are distinguished by the presence of posterior pores in the scolex. *D. robusta* is unique, with the bothrial grooves extending nearly to the base of the scolex. A key of the genus supplements the specific descriptions.

R.T.L.

242—Public Health Reports. Washington.

- a. HALL, M. C., 1938.—“Studies on trichinosis. VI. Epidemiological aspects of trichinosis in the United States as indicated by an examination of 1,000 diaphragms for trichinae.” 53 (26), 1086-1105.
 b. HALL, M. C., 1938.—“Studies on trichinosis. VII. The past and present status of trichinosis in the United States, and the indicated control measures.” 53 (33), 1472-1486.

(242a) On the basis of a further 700 necropsy studies, making 1,000 in all, Hall has extended his study of the epidemiology of trichinosis in the U.S.A. [see Helm. Abs., Vol. VI, No. 131b]. Incidence correlations which appear still to be valid are those with geographic areas, showing a low incidence in the South, a high incidence along the northern Atlantic and southern Pacific coasts, with intermediate incidences elsewhere; with certain race-sex groups, a high incidence being found in white males, Teutonic and Italian peoples, long-service military personnel and the older age-groups; and a low incidence in coloured males, white females, cases under prolonged hospitalization and in the younger age-groups. Correlations in the sea-going groups are

probably qualified by geographic factors. Possible reasons for these correlations are discussed, together with their relation to the problem of trichinosis in swine. V.D.V.S.

(242b) Pointing out that the incidence of human trichinosis in the U.S.A. is much higher than that of other countries, Hall discusses the causes and possible control measures. The only practical solution appears to be the use of a rational swine sanitation system and the control of garbage feeding, the major cause of porcine, and hence human, trichinosis. The details of such a control organization are fully discussed, the responsibility lying with the packing industry, by whom the necessary measures could most practically and economically be undertaken. V.D.V.S.

243—Publications of the Carnegie Institution of Washington.

- a. STUNKARD, H. W., 1938.—“Parasitic flatworms from Yucatan.” No. 491, 33-50.
- b. CHITWOOD, B. G., 1938.—“Some nematodes from the caves of Yucatan.” No. 491, 51-66.

(243a) Stunkard's material was collected from bats, reptiles and fishes of the caves of Yucatan. Trematodes described include *Parabascoides yucatanensis* n. g., n. sp. (Lecithodendriidae); *Acanthostomum minimum* n. sp., possessing an anal opening; *Anenterotrema auritum* n. g., n. sp., and *A. singulare* n. sp. (family incertae sedis); and *Clinostomum intermedialis* Lamont. For *Distoma lima* v. Ben. (not *D. lima* Rud.) he creates a new genus, *Choristogonoporus*, with one species *C. lima*. The only cestode species studied is *Oochoristica parva* n. sp. E.M.S.

(243b) From rats and bats in the Yucatan caves 13 species of nematodes are recorded. Of these 7 are new, viz.: *Pharyngodon oxkutzcabiensis* n. sp. in *Thecadactylus rapicaudus* and *P. yucatanensis* n. sp. in *Coleonyx elegans*; Ollulaninae are represented by *Bidigiticauda vivipara* n. sp. in *Artibeus jamaicensis yucatanicus*, and *Tricholeiperia carnegiensis* n. sp. and *T. pearsei* n. sp. in *Natalus mexicanus*. A key for the 14 genera of Ollulaninae is given. To Cuculanidae is added *Seuratum cancellatum* n. sp. from *Natalus mexicanus*. *Dorylaimus yucatanensis* n. sp. was found in fresh water in Luchil Cave, Tixcacal. R.T.L.

244—Queensland Agricultural Journal.

- a. ROBERTS, F. H. S., 1938.—“Red-worms in horses.” 50 (2), 216-217.

(244a) Roberts gives a short popular description of red-worms in horses and recommends for treatment 1.5 drams of oil of chenopodium per 250 lb. body weight in 1 to 2 pints of raw linseed oil. J.W.G.L.

245—Review of Gastroenterology.

- *a. HINMAN, E. H., 1938.—“Clinical aspects of *Strongyloides stercoralis* infection.” 5 (1), 24-34.
- b. FAUST, E. C., 1938.—“Experimental and clinical strongyloidiasis.” 5 (2), 154-158.

* Original not available for checking or abstracting.

(245b) Faust briefly discusses the life-cycle of *Strongyloides stercoralis*, the lesions it causes, and the symptomatology, diagnosis, and treatment of the disease. The specific treatment is gentian violet, 1 grain in enteric-coated tablets thrice daily for 16 days. Incomplete success will probably be due to the parasites' being high up, in the jejunum or duodenum, in which case the Murphy drip technique (introducing a 1% aqueous solution of the dye by duodenal tube drop by drop) is likely to prove effective.

B.G.P.

246—Revue de Pathologie Comparée et d'Hygiène Générale.

- a. CHEVALIER, P. & DESMONTS, T., 1938.—“Les anémies vermineuses de l'homme.” 38 (496), 3-61; (497), 165-218; (498), 345-377.

(246a) Chevalier & Desmonts discuss the aetiology, pathology, diagnosis and treatment of the helminthic anaemias in man, in the following self-contained sections each with its own bibliography. In the first part: hookworm anaemia, Trichuris anaemia, Ascaris anaemia and, more briefly, anaemias due to Oxyuris, Strongyloides, Filaria, and Trichinella; in the second part: cestode anaemias due to the two species of *Taenia* and to *Hymenolepis nana*, distome anaemias, and (in considerable detail) the Bilharzia anaemias.

B.G.P.

247—Riforma Medica.

- a. CICCHITTO, E., 1938.—“Il sintoma di Briançon nella diagnosi di cisti di echinococco.” 54 (28), 1083-1086.
b. MASTROSIMONE, C., 1938.—“Su di una caratteristica elefantiasi dello scroto.” 54 (33), 1257-1260.

248—Rivista di Biologia Coloniale.

- a. ZAVATTARI, E., 1938.—“Ambiente fisico e schistosomiasi vescicale in Libia.” 1 (1), 5-27.

(248a) The only species of *Bulinus* occurring in Libya is *B. contortus*. Zavattari has shown that cases of schistosomiasis and this mollusc have the same geographical distribution in that country. He gives details of two foci in Tripolitania, two more in Cirenaica, and several in the Fezzan, in some of which over 60% of the boys and over 10% of adults are infected. The presence of *B. contortus* in some permanent waters and its absence from others are apparently controlled by physico-chemical factors such as the concentration of chlorides.

B.G.P.

249—Science.

- a. ALICATA, J. E., 1938.—“The land-snail an intermediate host of the cecal fluke of poultry.” 88 (2275), p. 129.

(249a) Alicata demonstrates that in Honolulu *Postharmostomum gallinum* is transmitted by the snail *Eulota similis*.

P.A.C.

250—Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin.

- a. WETZEL, R., 1938.—“Untersuchungen über die Entwicklung der Pferde-strongylyiden.” 1938 (1/3), 18-19.
- b. WETZEL, R. & ENIGK, K., 1938.—“Gehäufte Todesfälle von *Nandus (Rhea americana)* durch Helminthenbefall.” 1938 (1/3), 19-20.
- c. ENIGK, K., 1938.—“Untersuchungen über die Physiologie und das Wirt-Parasitverhältnis von *Graphidium strigosum* (Trichostrongylidae, Nematoda). (Vorläufige Mitteilung).” 1938 (-/3), 21-23.

(250a) [This is an abstract of a paper which appears in full in the Arch. wiss. prakt. Tierheilk., 73 (2), 83-93. See Helm. Abs., Vol. VII, No. 81a.]

(250b) Wetzel & Enigk briefly report on the helminths of 4 *Rhea americana* which died at the Berlin Zoo, apparently from helminthiasis. In all 4, *Contortospiculum rhea* was present in enormous numbers in the body cavity. *Sicarius nobregai* was found under the gizzard lining in 2 birds, and a *Physaloptera* in the stomach. In the intestine were *Deletrocephalus cesarpintoi* and *Cittotaenia rhea*. B.G.P.

(250c) [This paper appears in full in Z. Parasitenk., 10 (3), 386-414. See Helm. Abs., Vol. VII, No. 265c.]

251—Southern Medical Journal.

- a. HOLTON, C. F., 1938.—“Syphilis, malaria and hookworm disease as industrial hazards in the south.” 31 (9), 1011-1016.

252—Taiwan Igakkai Zasshi.

- a. TOMITA, S., 1938.—“On the resistance of the filariform larvae of *Strongyloides papillosus* to various agents.” 37 (7), 1104-1111. [In Japanese : English summary p. 1111.]
- b. YUMOTO, Y. & CO, C., 1938.—“The incidence of intestinal parasites in Ishigaki Island, Okinawa Province, Japan.” 37 (8), 1267-1274. [In Japanese : English summary p. 1274.]

(252a) The resistance of the filariform larvae of *Strongyloides papillosus*, a common parasite of pigs in Formosa, was found by Tomita to be similar to that of *S. stercoralis* as reported by Kawai, in reaction to chemical drugs and dry and moist heat [see Helm. Abs., Vol. IV, No. 453c]. 1% tincture of iodine and Lugol's solution was instantly lethal. Acids and alkalis were comparatively good lethal agents, 0.2% hydrochloric acid killing in 15 to 40 minutes and 1% potassium hydroxide in 11 to 15 minutes. The common deodorants and anthelmintics were also good larvicides, but the common disinfectants and the bacterial dye-stuffs were not as effective. J.W.G.L.

253—Tidsskrift for Planteavl.

- a. BOVIEN, P., 1938.—“Skadedyr af saerlig Interesse.” In: “Plantesygdomme i Danmark 1937. Oversigt, samlet ved Statens plantepatologiske Forsøg. (Plant diseases and pests in Denmark 1937).” 43 (2), 259-274.

(253a) Boven records attacks of *Heterodera schachtii* in Denmark during 1937 on the following crops : oats, wheat, rye and potatoes. On the

last mentioned crop the pest occurred in a new locality. The root-knot eelworm, *H. marioni*, was found infesting *Scorzonera hispanica* (Black salsify) in the open.

T.G.

254—Tijdschrift voor Diergeneeskunde.

- a. JOLING, K. F., 1938.—“Een voor Nederland onbekende parasiet in de conjunctivaalzak van het rund.” 65 (13), p. 671.
- b. BAUDET, E. A. R. F., 1938.—“*Thelazia gulosa*, een parasiet uit de conjunctivaalzak van het rund.” 65 (13), 672-676.
- c. BAUDET, E. A. R. F., 1938.—“Strongylosis bij het paard.” 65 (14), 699-709.
- d. FRICKERS, J., 1938.—“Het voorkomen van *Dipylidium caninum* (Linné 1758); *Toxocara canis* (Werner 1782); *Ancylostoma caninum* (Ercolani 1859); *Dirofilaria immitis* (Leidy 1856); en *Spirocerca sanguinolenta* (Rudolphi 1819) bij den hond (*Canis familiaris*) in Suriname.” 65 (18), 921-924.

(254a) Joling describes the finding, in the conjunctival sacs of an ox and for the first time in Holland, of male and female *Thelazia* worms, an account of which is given in the following paper.

B.G.P.

(254b) Baudet gives an illustrated redescription of *Thelazia gulosa* found in the conjunctival sac of an ox in Holland [see previous abstract]. *T. rhodesi* differs in having the vulva 900 to 1,000 μ from the anterior end, as compared with 460 to 500 μ in *T. gulosa*. Baudet is of the opinion that *T. alfortensis*, the third species known from the ox, is synonymous with *T. gulosa*.

B.G.P.

(254c) Baudet gives a clinical discussion on the aetiology, pathology, treatment, and control of equine strongylosis, taking as his case an 18-months-old bay filly. He recommends carbon tetrachloride in doses of 0.1 g. per kg. body weight, and he also gives the method of intravenous tartar emetic against larvae in aneurysms or in the intestinal mucosa although he has not had much success with the latter treatment. In control, the most important step is to render and maintain free from infection all mares in foal. If possible, mares and foals should not run with other horses, but ruminants are from this aspect not dangerous. To attack the free-living infective larvae is at present practicable only in the laboratory. When it is a question of one or two foals on a small pasture it may prove worth while to remove the droppings daily: another way is to break up the droppings finely so that they rapidly dry out. Wherever possible, horses should be withheld from pastures which have been grazed during the previous year by horses, and from grass or hay from such pastures.

B.G.P.

255—Transactions of the American Microscopical Society.

- a. CORT, W. W. & BRACKETT, S., 1938.—“Two new species of strigeid cercariae in *Stagnicola palustris elodes* (Say) from the Douglas Lake region, Michigan.” 57 (3), 274-281.
- b. HERDE, K. E., 1938.—“Early development of *Ophiotaenia perspicua* La Rue.” 57 (3), 282-291.
- c. ACKERT, J. E., TODD, A. C. & TANNER, W. A., 1938.—“Growing larval *Ascaridia lineata* (Nematoda) *in vitro*.” 57 (3) 292-296.

(255a) Cort & Brackett describe *Cercaria macradena* n. sp. and *Cercaria micradena* n. sp., both characterized by an unusual arrangement of the penetration glands, 2 being anterior and 2 posterior to the ventral sucker. The specific names refer to the extreme difference in size of these glands in the 2 species. They are undoubtedly larvae of closely related species of strigeids.

E.M.S.

(255b) Herde makes further observations on the structure and life-history of *Ophiotaenia perspicua*, a cestode parasite of *Natrix rhombifera*. He notes the presence of fine cuticular spines, densely packed on the scolex and neck but becoming sparser further down the strobila. Hatched larvae may live for as long as 76 hours in tap-water but when brought in contact with *Cyclops viridis* or *Microcyclops varicans* invade the tissues and develop to the plerocercoid stage in from 8 to 14 days. Heavily infested cyclops become sluggish and the mortality rate between 6 and 12 days after infection is heavy. When ingested by the fish *Apomotis cyanellus* encystation occurs, and this may be the second intermediate host.

P.A.C.

(255c) Ackert, Todd & Tanner have examined the behaviour of young ascarid and heterakid larvae, grown *in vitro*, using as culture media hens eggs, carbohydrate mixtures on dextrose cornmeal agar plates, and a saline-dextrose solution on the same base. Larvae were removed from chickens when aged from 23 to 36 days and the growth rate examined. Some of the larvae lived for 11 days on these media but the best growth rate was seen in the salt-dextrose medium when in 9 days a growth of 25.9 mm. occurred. This represented an increase of 53.8%. Control worms in isotonic saline failed to grow.

P.A.C.

256—Transactions of the Royal Society of Tropical Medicine and Hygiene.

- a. KNOTT, J., 1938.—“The treatment of filarial elephantiasis of the leg by bandaging.” 32 (2), 243-252.
- b. MAINZER, F., 1938.—“Bilharzial asthma. Bronchial asthma in *Schistosoma* infection.” 32 (2), 253-264.

257—Veterinarski Arhiv.

- a. MIKAČIĆ, D., 1938.—“Paraziti naših ovaca.” 8 (3), 114-140.

(257a) On the basis of 50 post-mortem examinations of sheep in Yugoslavia, Mikačić gives the incidence of 30 helminthic and 9 arthropod parasites. Descriptions of most of the parasites are included, and the spicules of the principal trichostrongyles are figured, as is also the male tail of an unidentified species of *Protostrongylus*.

B.G.P.

258—Veterinary Medicine.

- a. WHITNEY, L. F., 1938.—“Longevity of the whipworm.” 33 (2), 69-70.

(258a) Faecal examinations of dogs in the autumn and spring leads Whitney to conclude that the life of the dog whipworm does not exceed 5 months.

J.W.G.L.

259—Veterinary Record.

- a. MASHETER, J. W. H., 1938.—“Treatment of trichostrongylosis.” [Correspondence.] 50 (32), p. 1040.
- b. OLDHAM, J. N., 1938.—“Changes in the names of worms: the rules of zoological nomenclature as applied to veterinary helminthology.” 50 (36), 1131-1138.

(259a) Masheter's letter to the Editor mentions his success with tetrachlorethylene as an anthelmintic against trichostrongyles in young cattle.

J.W.G.L.

(259b) After referring to the rules formulated by the International Commission on Zoological Nomenclature and their application to veterinary helminthology, Oldham appends an alphabetical list of the correct names of worms as now generally accepted, and some of the commoner synonyms. The list includes not only those forms which are common in domestic animals in this country but also a number of species (marked*) which are either unknown or of rare occurrence in the British Isles.

D.O.M.

260—Wiener Tierärztliche Monatsschrift.

- a. BERCHART, K., 1938.—“Zur Bekämpfung der Leberegelseuche.” 25 (4), p. 115.

(260a) Against fascioliasis in cattle Berchart has had good results with Fowler's (arsenical) Solution, giving one or two tablespoonfuls, according to size, daily for 8 days and repeating the cure after an interval of 3 weeks.

B.G.P.

261—Zeitschrift für Fleisch- und Milchhygiene.

- a. MARQUARD, W., 1938.—“Ungewöhnlicher Finnenfund bei einem irländischen Ochsen.” 48 (23), p. 444.

(261a) Marquard briefly reports an unusual site for a *Cysticercus bovis*, namely, within a lymphatic nodule in the shoulder muscle of an Irish ox.

B.G.P.

262—Zeitschrift für die Gesamte Neurologie und Psychiatrie.

- a. ROTHFELD, J., 1938.—“Zur Symptomatologie und Diagnose der Hirncysticerkose.” 160, 530-549.

263—Zeitschrift für Hygienische Zoologie und Schädlingsbekämpfung.

- a. WETZEL, R., 1938.—“Insekten als Zwischenwirte von Bandwürmern der Hühnervögel. (Sammelreferat).” Year 1938 (3), 84-92.

(263a) Wetzel, from a review of the relevant literature, briefly traces the increase in our knowledge of the ability of various insects to act as intermediate hosts of the tapeworms of domestic fowls. A concluding list is given of 58 Orthoptera, Diptera, Coleoptera and Hymenoptera which act as vectors

of one or more of the following cestodes: *Raillietina cesticillus*, *R. echinobothrida*, *R. tetragona*, *R. friedbergieri*, *R. magninumida*, *Choanotaenia infundibulum*, *Metroliasthes lucida*, *Hymenolepis carioca* and *H. cantaniana*.

J.N.O.

264—Zeitschrift für Infektionskrankheiten, Parasitäre Krankheiten und Hygiene der Haustiere.

- a. KRANEVELD, 1938.—“Stephanofilariosis in Niederländisch-Ostindien und ähnliche Infektionen in anderen Ländern.” 53 (4), 291-332.

(264a) In this paper Kraneveld collates all the available knowledge of stephanofilariasis both from the Dutch East Indies and from other countries whence it has been recorded. It is a summary of the subject in which every aspect of the disease is dealt with, from aetiology to treatment. The differential diagnosis of the various species of *Stephanofilaria* is discussed and reference is made to the possibility that in the Dutch East Indies the species of parasites in cattle, buffaloes and goats may not all be identifiable as *S. dedoesi*.

J.J.C.B.

265—Zeitschrift für Parasitenkunde.

- a. MATOFF, K., 1938.—“Über das Vorkommen von *Schwartziella nodulosa* (Schwartz 1928) in bulgarischen Büffeln.” 10 (3), 329-339.
- b. KOMIYA, Y., 1938.—“Die Entwicklung des Exkretionssystems einiger Trematodenlarven aus Alster und Elbe, nebst Bemerkungen über ihren Entwicklungszyklus.” 10 (3), 340-385.
- c. ENIGK, K., 1938.—“Ein Beitrag zur Physiologie und zum Wirt-Parasitverhältnis von *Graphidium strigosum* (Trichostrongylidae, Nematoda).” 10 (3), 386-414.
- d. KAHL, W., 1938.—“Nematoden in Seefischen. I. Erhebungen über die durch Larven von *Porrocaecum decipiens* Krabbe in Fischwirten hervorgerufenen geweblichen Veränderungen und Kapselbildungen.” 10 (3), 415-431.
- e. WALTER, E., 1938.—“Studie über die Verbreitung der Helminthen in der Bevölkerung Venezuelas.” 10 (3), 432-435.
- f. MENDHEIM, H., 1938.—“Über eine zweckmässige Abänderung der Looss'schen Schüttelmethode nebst Bemerkungen zur helminthologischen Technik.” 10 (3), p. 436.

(265a) Matoff redescribes and illustrates *Schwartziella nodulosa*, which is largely responsible for the widespread production of intestinal nodules in Bulgarian buffalo. Unlike the smaller nodules in oxen due to nematode larvae, the large buffalo nodules contain fully adult worms. The nodules occur in the wall of the small intestine and caecum, often to the number of several hundreds in one buffalo. Matoff discusses several small points of difference between his material and the original *Cooperia nodulosa* of Schwartz.

B.G.P.

(265b) In this detailed and copiously illustrated paper Komiya traces the development of the excretory system in *Diplostomum spathaceum* from the sporocyst to the metacercaria and in *Paracoenogonimus ovatus* from sporocyst to adult, and describes the excretory system of the young adult *Tylodelphys rhachiaea*, of the metacercarial *Cotylurus cornatus*, and of 5 cercariae from the Elbe. Three of the latter are new: *C. hamburgensis* n. sp., *C. elbensis* n. sp.

and *C. incerta* n. sp.; the development of one of the others, *Opisthioglyphe ranae*, was traced through to the adult stage; all 5 cercariae were from *Limnaea* spp. Komiya has shown that *Viviparus viviparus* is the first intermediary of *Paracoenogonimus ovatus*. B.G.P.

(265c) Enigk reports the results of a large number of observations on the developmental stages of *Graphidium strigosum* and on the host-parasite relationship. The first part of the paper deals with factors which stimulate the shedding of the sheath by third-stage larvae, the pH in the intestinal canal of the mature worm, the presence of enzymes, and the mechanisms of absorption and excretion. The second part of the paper deals with the effect on the degree of infection of different foods ingested by the rabbit, the longevity of the parasite in the host, the blood picture during heavy infections, and the effect on the host of repeated administration of small quantities of infective larvae. R.H.H.

(265f) Mendheim finds that it is an improvement on Looss's method, of shaking intestinal contents with a saturated sublimate solution, to shake in water or normal saline. Living material can be observed in this way and forms like the echinostomes, which fail to relax in sublimate, are best left in water for several hours. The mucus which floats after shaking should be examined for very small forms which often remain entangled in it. The best carmine stain is paracarmine. Old, deeply stained material can be decolorized in undiluted Lugol's solution. B.G.P.

266—Zentralblatt für Bakteriologie. Abteilung I. Originale.

- a. KREIS, H. A., 1938.—“Beiträge zur Kenntnis parasitischer Nematoden. VII. Parasitische Nematoden der schweizerischen wissenschaftlichen Expedition nach Angola (Afrika) im Jahre 1932.” 142 (1/2), 90-105.
- b. KREIS, H. A., 1938.—“Beiträge zur Kenntnis parasitischer Nematoden. VIII. Neue parasitische Nematoden aus dem Naturhistorischen Museum Basel.” 142 (5/6), 329-352.

(266a) Of 6 species recorded 3 are from Aves, including *Hartertia africana* n. sp. from *Otis* s.p. and *Physaloptera brachycerca* n. sp. from *Kaupifalco macrogrammica*. Three species are from mammals, of these *Protospirura anopla* n. sp. from *Cephalophus* sp., and *Setaria hornbyi* var. *brevicaudatus* n. var. from *Hippotragus* sp. are new. A detailed description is given of *Crossophorus collaris*. *Hartertia africana* n. sp. is differentiated from *H. annulata* Cram. R.T.L.

(266b) From material at the Basle Natural History Museum, Kreis describes the following: *Kalicephalus implicatus* n. sp. (females only) from *Crotalus terrificus*; *Typhlonema salomonis* n. g., n. sp., Oxyurinae (females only) from the stomach and intestine of *Gecko vittatus*; *Strongyluris meridionalis* n. sp. from the caecum of *Gonyocephalus* sp.; *Ophidascaris microspicula* n. sp. from the intestine of *Naja tripudians*; *O. genohcteromegala* n. sp. from *Coluber quatuorlineatus*; *Agamascaris africana* n. sp. from the oesophagus of *Rana adspersa*; *A. madagascariensis* n. sp. from *Phelsuma madagascariensis*; *Dirofilaria asymmetrica* n. sp. from *Cephalophus grimmia*; and *Foleyella chamaeleonis* n. sp. from the body cavity of *Chamaeleon pardalis*. There are also notes on undetermined species of *Ascaridia* (2 females in faeces of *Gallus*), *Angusticaecum* (larva from *Testudo iberia*), and *Gongylonema* (female in stomach-wall of *Spalax*). B.G.P.

NON-PERIODICAL LITERATURE.

- 267—IVANISSEVICH, O. & FERRARI, R. C., 1938.—“Equinococosis hidatídica.” Buenos Aires, 18 pp.
- 268—MARTINS, A. V., 1938.—“Contribuição ao estudo do genero *Australorbis* Pilsbry, 1934.” Thesis, Belo Horizonte, 66 pp.
- 269—SCHIPULL, H., 1938.—“Beitrag zur Beurteilung der Brauchbarkeit der Hautreaktion zum Nachweis der Trichinose.” Inaugural-Dissertation, Hannover, 26 pp.
- [For abstract of this paper see Helm. Abs., Vol. VI, No. 243a.]
- 270—*STREICH, W., 1938.—“Parasitenbefunde bei gesunden Schlachtschweinen.” Inaugural-Dissertation, Hannover.
- 271—WHITLOCK, J. H., 1938.—“Practical identification of endoparasites for veterinarians.” Minneapolis, iii + 37 pp.
- 272—LIVRO JUBILAR DO PROFESSOR LAURO TRAVASSOS. Editado para comemorar o 25^o aniversario de suas actividades scientificas (1913-1938). Rio de Janeiro, 1938, xx + 589 pp:
- a. TRAVASSOS, L., 1938.—“Lista dos trabalhos publicados pelo Prof. Lauro Travassos (1913-1937).” pp. vii-xviii.
 - b. AFRICA, C. M. & LEON, W. DE, 1938.—“Observations on the mechanism of phagocytosis of various helminth ova.” pp. 1-9.
 - c. ALICATA, J. E., 1938.—“The life history of the gizzard-worm (*Cheilospirura hamulosa*) and its mode of transmission to chickens, with special reference to Hawaiian conditions.” pp. 11-19.

(272a) The titles of 215 papers published between 1913 and 1937 are arranged under year of issue. R.T.L.

(272b) Africa & Leon give a description, illustrated by microphotographs, of the method by which the eggs of *Ascaris lumbricoides*, *Fasciola gigantica* and *Schistosoma japonicum* occurring in tissues are attacked by foreign-body giant cells. Their material was partly naturally-occurring parenteral infections, but mainly experimental intraperitoneal injections of eggs in monkeys. Whereas *Ascaris* eggs are completely engulfed by giant cells, the eggs first embryonating in some cases, *Fasciola* and *Schistosoma* eggs are usually invaded or crushed and occasionally pulled apart. In contrast to these, the eggs of heterophyids are never attacked by giant cells. B.G.P.

(272c) Alicata has successfully used *Conocephalus saltator*, *Atractomorpha ambigua*, *Oxya chinensis* (grasshoppers); *Orchestia platensis*; *Tribolium castaneum*, *Tenebroides nana*, *Carpophilus dimidiatus*, *Dactylosternum abdominale*, *Typhaea stercorea*, *Palorus ratzeburgi*, *Euxestus* sp., *Litargus balteatus*; and *Oxydema fusiforme* and *Sitophilus oryzae* as new intermediate hosts for *Cheilospirura hamulosa*. Some of these are naturally infected in endemic areas. The larvae hatch in the vector within 5 hours, reach the infective stage in about 19 days, and become egg-laying adults in 76 to 90 days. P.A.C.

* Original not available for checking or abstracting.

272 — LIVRO JUBILAR DO PROFESSOR LAURO TRAVASSOS.
[cont.] Editado para comemorar o 25^o aniversario de suas actividades
scientificas (1913-1938). Rio de Janeiro, 1938, xx+589 pp.

- d. ALMEIDA, J. LINS DE, 1938.—“Sobre um interessante parasito de insecto: *Lauronema travassosi* n. gen., n. sp. (Nematoda).” pp. 21-23.
- e. BADANINE, N. V., 1938.—“Sur la question d’helminthofaune du chameau en Turkmenie.” pp. 61-73.
- f. BAER, J. G., 1938.—“*Duboisella proloba* n. gen., n. sp., un trématode de la sarigue, *Didelphys aurita* L.” pp. 75-79.
- g. BHALERAO, G. D., 1938.—“On a new trematode, *Travassosstomum natritis* n. g., n. sp., from the intestine of the Indian river-snake, *Natrix piscator* (Schneider).” pp. 81-86.
- h. CABALLERO Y C., E., 1938.—“Contribución al conocimiento de los nematodos de las aves de México. V.” pp. 91-97.
- i. CAMERON, T. W. M., 1938.—“On the morphology and parasitic development of *Travassosius rufus* Khalil, 1922, a trichostrongyle parasite of the Canadian beaver (*Castor canadensis canadensis*).” pp. 103-106.
- j. CHANDLER, A. C., 1938.—“A report on the parasites of a bat, *Nycticeius humeralis*, with description of four new helminths.” pp. 107-114.

(272d) Almeida gives a description of *Lauronema travassosi* n. g., n. sp., t. sp. from the intestine of the scarabaeid, *Ligyris ebenus* (Syn. *Cyclocephala scarabaeina*), taken at Jacarépaguá, Brazil. The new genus has certain affinities with the equine genus *Probstmayria*. J.N.O.

(272e) Badanine lists 32 species of helminths found in camels in Turkmenia. Descriptions are given of *Thelazia leesei* and *Onchocerca fasciata*. R.T.L.

(272f) Baer names a new strigeid in *Didelphys aurita* as *Duboisella proloba* n. g., n. sp. This genus is characterized by the long cylindrical anterior half of the body in which there is a very long tribocytic organ. In the male an ejaculatory pouch communicates with a very muscular periprostata. A new subfamily Duboisellinae is made for this species. R.T.L.

(272g) Bhalerao describes *Travassosstomum natritis* n. g., n. sp. from the Indian *Natrix piscator*. This trematode belongs to the Proterodiplostomidae and with *Proalarioides* forms a new subfamily Travassosstominae. R.T.L.

(272h) Caballero briefly records *Oxyspirura crassa* n. sp. in *Bubo virginianus melancerus* and *Aprocta travassosi* n. sp. in *Curucujus massena* and redescribes *Physaloptera acuticauda*. R.T.L.

(272i) Cameron considers *Travassosius americanus* Chapin, 1925, from *Castor canadensis*, to be identical with *T. rufus* Khalil, 1922. Fourth stage larvae from the stomach of a beaver are described and figured. R.T.L.

(272j) Chandler has found 2 new nematodes and 3 species of fluke, of which one is new, in the bat *Nycticeius humeralis*, collected in Texas. *Capillaria palmata* n. sp. is closely related to *C. speciosa*; *Allintoshius travassosi* n. sp. is differentiated from *A. nycticeius* in the same bat. Of the trematodes *Urotrema shillingeri*, *Dicrocoelium rileyi* and *Limatulum diminutum* n. sp. brief descriptions are given. R.T.L.

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[cont.] Editado para comemorar o 25^o aniversario de suas actividades
scientificas (1913-1938). Rio de Janeiro, 1938, xx+589 pp.

- k. CHITWOOD, B. G., 1938.—“The status of *Protospirura* vs. *Mastophorus* with a consideration of the species of these genera.” pp. 115-118.
- l. CHRISTENSON, R. O., 1938.—“Life history and epidemiological studies on the fox lungworm, *Capillaria aërophila* (Creplin, 1839).” pp. 119-136.
- m. DUBOIS, G., 1938.—“Liste systématique des strigéidés du Brésil et du Venezuela.” pp. 145-155.
- n. FAUST, E. C. & TANG, C. C., 1938.—“Report on a collection of some Chinese Cyathocotylidae (Trematoda, Strigeoidea).” pp. 157-168.
- o. GOODEY, T., 1938.—“Observations on two free-living nematodes, *Hexatylus coprophagus* n. sp., and *H. consobrinus* (de Man, 1906) Goodey, 1932.” pp. 179-182.

(272k) Chitwood is of opinion that there are 2 distinct types in the species of *Protospirura*, one with very unequal spicules, the other in which these are equal or subequal. *Protospirura* and *Mastophorus* are retained. A table sets out the measurements of the various species of these 2 genera.

R.T.L.

(272l) Christenson gives data on the incidence of *Capillaria aërophila* in foxes on fur-farms, chiefly in Minnesota and Wisconsin. He also describes the life-history, which is direct, the eggs taking at least 35 days to become infective. 50% of embryonated eggs resisted local winter conditions. Temperatures around 55°C. are lethal, as are also ultraviolet radiation and drought.

B.G.P.

(272m) Dubois states that the known species of Strigeidae in Brazil now number 55. These are listed under their respective families.

R.T.L.

(272n) Faust & Tang describe 5 new cyathocotylid flukes from China, viz.: (i) *Cyathocotyle szidatiana* n. sp. from the Peiping domestic duck, (ii) *L. lutzi* n. sp. from the domestic fowl and goose, and (iii) *L. bambusicolae* n. sp. from *Bambusicola thoracica*. These are provisionally referred to the genus *Linstowiella*. (iv) *Travassosella pagumae* n. g., n. sp. from *Paguma larvata* and *Mustela* sp. which is nearly related to *Linstowiella*. (v) *Proso-stephanus parvoviparus* n. sp. from *Meles leptorhynchus*. It seems probable that all cyathocotylids have a similar life-cycle. The anacetabular fork-tailed cercaria discharged from fresh-water molluscs encysts in the tissues of fresh-water fishes, metamorphosing into a prohemistomulum type of metacercaria, and becoming adult when eaten by various reptiles, birds and mammals.

R.T.L.

(272 o) Goodey describes and figures a new anguillulinoid nematode, *Hexatylus coprophagus* n. sp., females only of which were found in sheep droppings. The points of difference from *H. viviparus* are set out. He also redescribes and figures *Hexatylus consobrinus* (de Man).

T.G.

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[cont.] Editado para comemorar o 25° aniversario de suas actividades
scientificas (1913-1918). Rio de Janeiro, 1938, xx+589 pp.

- p. HALL, M. C., 1938.—“Three parasites which habitually surmount our sanitary barriers.” pp. 195-211.
- q. HARWOOD, P. D., 1938.—“Reproductive cycles of *Raillietina cesticillus* of the fowl.” pp. 213-220.
- r. ISHII, N. & SAWADA, T., 1938.—“Studies on the ectoparasitic trematodes.” pp. 231-243.
- s. JOYEUX, C. & BAER, J. G., 1938.—“Recherches sur le début du développement des cestodes chez leur hôte définitif.” pp. 245-249.
- t. KARVE, J. N., 1938.—“Some nematode parasites of lizards.” pp. 251-258.
- u. LAL, M. B., 1938.—“On a new species of *Psilorchis* from the intestine of the common teal, *Nettion crecca*.” pp. 259-262.
- v. LENT, H. & FREITAS, J. F. TEIXEIRA DE, 1938.—“Tres novos trichostrongylideos parasitos de roedores brasileiros.” pp. 269-273.

(272p) Hall considers that *Trichinella spiralis* and *Enterobius vermicularis* are very prevalent in U.S.A. largely because of the peculiarities of their life-histories. The swine industry should be encouraged to develop methods which will destroy trichinae in garbage and eliminate pork scraps from slops and swills. The best prospect of success in the control of *E. vermicularis* at the moment lies in therapy, not sanitation. R.T.L.

(272q) Harwood believes that the average life-span of the cestode *Raillietina cesticillus* in the domestic fowl is 5 to 6 months. A bird kept infected for 18 months showed cycles of intense segment elimination, at the beginning of which the segments were large and full of eggs. Segments gradually became fewer and contained less eggs until the cycle was abruptly terminated by the appearance of a large chain of unripe segments, and a period of rest ensued. P.A.C.

(272r) Ishii & Sawada give an account of 15 species of ectoparasitic trematodes collected in Japan. R.T.L.

(272s) Joyeux & Baer note that the plerocercoid of *Diphyllbothrium erinacei europaei* loses its posterior part in the definitive host. Only the anterior part develops into adult form. This is also the case in *Taenia taeniaeformis* but the pleurocercoid of *Ligula intestinalis* develops to adult form without any loss of substance. R.T.L.

(272t) Karve names 2 new nematodes, *Thubunaea dactyluris* n. sp. from *Hemidactylus flaviviridis* and *Strongyluris karawirensis* n. sp. from *Calotes versicolor*. Immature encysted nematodes in the muscles of *H. flaviviridis* apparently belong to the genus *Physaloptera*. R.T.L.

(272u) Lal describes *Psilorchis ajgainis* n. sp. from the common teal, *Nettion crecca*, near Lucknow. The species can be distinguished from *P. indicus* by the relation of the cirrus sac to the ventral sucker and the shape of the ovary and the vitellaria. P.A.C.

(272v) Lent & Freitas give brief systematic descriptions of *Longistriata travassosi* n. sp., *Heligmodendrium interrogans* n. sp. and *Trichotravassosia travassosi* n. g., n. sp. This new genus is placed in *Viannaiinae*. R.T.L.

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[cont.] Editado para comemorar o 25° aniversario de suas actividades
scientificas (1913-1938). Rio de Janeiro, 1938, xx+589 pp.

- w. LINTON, E., 1938.—“Cestode hold-fasts.” pp. 275-278.
- x. MACY, R. W., 1938.—“A new species of trematode, *Prosthodendrium travassosi* (Lecithodendriidae) from a Minnesota bat.” pp. 291-292.
- y. MANTER, H. W., 1938.—“Two new monogenetic trematodes from Beaufort, North Carolina.” pp. 293-298.
- z. McMULLEN, D. B., 1938.—“Notes on the morphology and life cycles of four North American cercariae.” pp. 299-306.
- ba. MEHRA, H. R., 1938.—“Two new distomes of the subfamily Stomylo-
treminae Travassos, 1922 (family Lepodermatidae Odhner).” pp. 307-314.
- bb. MOMMA, K., YAMASHITA, J. & KAMITANI, K., 1938.—“Hexyl-
resorcinol and alantolacton in therapy of human ascariasis.” pp. 323-327.
- bc. MÖNNIG, H. O., 1938.—“A new spirurid nematode from a mongoose.”
pp. 333-335.

(272w) Linton expresses the opinion that the scolex of the cestodes is not a modification of a structure present in the free-living ancestor. A few of the different types of scolex are cited in illustration of evolutionary diversities. Attention is drawn to the pseudoscolex of *Fimbriaria*. In some cases the scolex acts as an organ of locomotion as in *Anthobothrium* while *Phyllobothrium* is an example of its use in the metabolism of the worm.

R.T.L.

(272x) Macy describes *Prosthodendrium travassosi* n. sp. from the bat *Eptesicus fuscus* in Minnesota.

R.T.L.

(272y) Manter records *Microcotyle heteracantha* n. sp. and *Tricotyle scoliodon* n. sp. from the gills of fishes.

R.T.L.

(272z) McMullen contributes notes on 3 Xiphidiocercariae and a cercaria apparently belonging to the Psilostomidae. They are named *C. talboti*, *C. herberi*, *C. welleri* and *C. thomasi* n. spp. Their encystment in various second intermediate hosts is reported.

R.T.L.

(272ba) Mehra gives a key to the Stomylotreminae and describes from Allahabad birds *Stomylotrema travassosi* n. sp. from *Artamus fuscus*, and *Laterotrema indiana* n. sp. from *Dicrurus macrocercus macrocercus*.

R.T.L.

(272bb) Momma, Yamashita & Kamitani have treated 90 cases of human ascariasis with hexylresorcinol, but found it less efficacious than reported by others. The best results were obtained with a dose of 0.5 g., giving a 65% cure. Forty-one cases were treated with Alantolacton, a drug obtained from *Inula helenium*. This also was found to be less efficient than previously reported.

K.S.

(272bc) Mönnig names a new spirurid *Travassospirura dentata* n. g., n. sp., collected at Onderstepoort in South Africa from *Myonax cauii cauii*.

R.T.L.

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[cont.] Editado para comemorar o 25° aniversario de suas actividades
scientificas (1913-1938). Rio de Janeiro, 1938, xx+589 pp.

- bd. MUELLER, J. F., 1938.—“An additional species of *Diphyllbothrium* (subgenus *Spirometra*) from the United States.” pp. 337-339.
- be. NAGATY, H. F., 1938.—“The genera *Asymmetricostrongylus* Nagaty, 1932 and *Libyostrongylus* Lane, 1923 and their relation to the genus *Trichostrongylus* Looss, 1905.” pp. 341-352.
- bf. ORTLEPP, R. J., 1938.—“On two cestodes recovered from a South African kite.” pp. 353-358.
- bg. PALOMBI, A., 1938.—“Metodi impiegati per lo studio dei cicli evolutivi dei trematodi digenetic. Materiale per la conoscenza della biologia di *Podocotyle atomon* (Rud.).” pp. 371-379.
- bh. PEREIRA, C., 1938.—“*Travnema travnema* n. g. e n. sp. (Nematoda Oxyuridae), parasito de *Curimatus elegans* (Pisces: Characinidae) no nordeste brasileiro.” pp. 381-383.
- bi. PIGULEWSKY, S. W., 1938.—“Eine neue Trematode aus Fam. Steringophoridae.” pp. 389-390.
- bj. PIGULEWSKY, S. W., 1938.—“Zur Revision der Parasiten-Gattung *Lecithaster* Lühe, 1901.” pp. 391-397.
- bk. POCHE, F., 1938.—“Zur Erklärung der Configuration des Exkretionssystems in den freien Proglottiden von *Wageneria proglottis* und über die Berechtigung der Gattung *Wageneria* (Tetrarhynchea).” pp. 403-406.

(272bd) Mueller has discovered a further species of *Diphyllbothrium* in the United States by feeding spargana from a water snake, *Natrix* sp., to cats. It is similar to that described by Cameron (1936) from the racoon in Trinidad. The exact limits of the species *D. mansonii* or *erinacei* are discussed.

R.T.L.

(272be) Nagaty defines for the first time the genus *Asymmetricostrongylus* Nagaty, 1932 and differentiates it from *Trichostrongylus* and *Libyostrongylus* Lane, 1923. Three species of *Asymmetricostrongylus* and 2 species of *Libyostrongylus* are redescribed.

R.T.L.

(272bf) Ortlepp gives descriptions of 2 new cestodes from *Milvus migrans*, viz., a Dilepidinae *Uncinaria travassosi* n. sp. and *Idiogenes travassosi* n. sp.

R.T.L.

(272bg) Palombi describes developmental stages from metacercaria to adult of *Podocotyle atomon*, confirms Nicoll's suggestion that the latter's *P. atherinae* might be a synonym, and discusses possible intermediaries. *Cercaria setifera* may pertain to this species.

B.G.P.

(272bh) Pereira creates the genus *Travnema* in the Oxyurinae for *T. travnema* n. sp. from *Curimatus elegans*.

R.T.L.

(272bi) Pigulewsky gives a brief description of a Steringophorinae named *Ovotrema pontica* n. g., n. sp. from *Engraulus encrasicolus ponticus* from the Black Sea.

R.T.L.

(272bj) Pigulewsky revises the Hemiuridae. It now contains 6 subfamilies and 23 genera including *Lecithaster tauricus* n. sp., *Lecithurus* n. g. for *Lecithaster lindbergi* Layman, 1930, and *Mordvilkovia* n. g. for *Lecithaster galeatus* and *L. anisotremi*.

R.T.L.

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- bl. PRICE, E. W., 1938.—“The monogenetic trematodes of Latin America.” pp. 407-413.
- bm. PROENÇA, M. C., 1938.—“Sobre um novo typo de Heterakinae Railliet & Henry, 1912. (Nematoda: Subuluroidea).” pp. 419-420.
- bn. SANDGROUND, J. H., 1938.—“On three species of filariid nematodes from sloths.” pp. 421-428.
- bo. SCHWARTZ, B. & PORTER, D. A., 1938.—“The localization of swine lungworm larvae in the earthworm, *Helodrilus foetidus*.” pp. 429-440.
- bp. STEFANSKI, W., 1938.—“*Goezia sigalasi* n. sp., parasite d'une ‘vive’ (*Trachinus draco*).” pp. 447-454.
- bq. SWALES, W. E., 1938.—“*Skrjabinigylus nasicola* (Leuckart, 1842) Petrow, 1927, a nematode parasitic in the frontal sinuses of American Mustelidae.” pp. 455-458.

(272bl) As only 5 species of Monogenea have been recorded from countries south of the United States they are now redescribed. *Cleidodiscus travassosi* n. sp. and *C. chavarriai* n. sp. from *Rhamdia rogersi* are new forms.

R.T.L.

(272bm) Proença describes *Lauroia travassosi* n. g., n. sp., a heterakid of the edentates *Dasyypus sexcinctus* and *Tatus novemcinctus* in Brazil. The genus can be distinguished from *Aspidodera* by the shape of the head, the position of the vulva in the anterior third, and the absence of caudal sucker and gubernaculum.

P.A.C.

(272bn) Sandground finds that sloths of Brazil are parasitized by three filarial species, viz., *Dirofilaria incrassata* and *Dipetalonema spiralis*, and *Bostrichodera bequaerti* n. g., n. sp. *Bostrichodera* is apparently related to *Onchocerca* and *Paronchocerca* but is distinct in size, in the possession of peculiarities in the cuticular annulations, and of highly developed caudal alae and papillae.

P.A.C.

(272bo) Schwartz & Porter find that larvae of species of *Metastrongylus* and *Choerostongylus* live almost entirely in the blood vascular system of the earthworm, *Helodrilus foetidus*, the bulk of them being found associated with the calciferous glands, where they could be recovered 48 to 72 hours after experimental infection. The affinity of the larvae for these glands is probably related to their function, for these are glands which regulate the carbohydrate concentration of the blood. Infective larvae eventually become encysted in fibrous capsules, die, and disintegrate.

P.A.C.

(272bp) Stefański has recovered a nematode, *Goezia sigalasi* n. sp. from *Trachinus draco*, a fish kept in an aquarium at Arcachon. It is a small worm differing from other species by the appearance of the caudal extremity which is decorated by 12 pairs of papillae and by a whorl of papilliform structures.

P.A.C.

(272bq) Swales has identified a parasite inhabiting the frontal sinuses of the Canadian species of *Mustela*, *Martes*, *Lutra*, *Spilogale* and *Mephitis* as *Skrjabinigylus nasicola*. The small differences from the European forms are not of sufficient importance to warrant the creation of a new species.

P.A.C.

272 — LIVRO JUBILAR DO PROFESSOR LAURO TRAVASSOS: [cont.] Editado para comemorar o 25° aniversario de suas actividades scientificas (1913-1938). Rio de Janeiro, 1938, xx+589 pp.

- br. THAPAR, G. S., 1938.—“Progress of helminthology in India.” pp. 459-465.
- bs. TIMON-DAVID, J., 1938.—“On parasitic trematodes in echinoderms.” pp. 467-473.
- bt. TORRES, C. M. & AZEVEDO, A. P. DE, 1938.—“Lesões produzidas no homem por *Strongyloides*. Sobre a ‘hyperinfection’.” pp. 475-487.
- bu. TUBANGUI, M. A., 1938.—“Pseudophyllidean cestodes occurring in the Philippines.” pp. 489-494.
- bv. VAZ, Z., 1938.—“Nova especie do genero *Ophidascaris* parasita da cascavel (*Crotalus terrificus*).” pp. 495-499.
- bw. PÉREZ VIGUERAS, I., 1938.—“Nota sobre algunos nematodos parasitos nuevos de Cuba.” pp. 501-508.
- bx. WARD, H. B., 1938.—“On the genus *Deropristis* and the Acanthocolpidae. (Trematoda).” pp. 509-521.

(272bs) Timon-David summarizes our knowledge of the larval trematode parasites of echinoderms. The metacercariae develop into adults in (i) sea birds, (ii) fishes. A third group contains metacercariae of which the definitive hosts are unknown. Mention is made of *Cleistogamia holothuriana* Faust, 1924 which occurs as an adult in a Holothurian in the Andaman Islands.

R.T.L.

(272bu) Tubangui reports 5 species of pseudophyllids from the Philippines of which 2 are new, viz., *Scyphocephalus secundus* n. sp., in *Varanus salvator* and *Bothriocephalus travassosi* n. sp. in *Anguilla mauritiana*. *Diphyllobothrium mansonii* occurred in dogs and cats in different parts of the Philippines.

R.T.L.

(272bv) *Ophidascaris travassosi* n. sp. from *Crotalus terrificus* in Brazil is reported by Vaz.

R.T.L.

(272bw) Pérez Vigueras adds to Cuban helminthology *Laurotravassoxyuris travassosi* n. g., n. sp. in the fish *Holacanthus tricolor* and *Travassozolaimus travassosi* n. g., n. sp. in the reptilian *Chamaeleolis chamaeleontides*; both genera are Oxyuridae. *Oswaldocruzia lenteixeirai* n. sp. from *Hyla septentrionalis* and *Cheilospirura multipapillosa* n. sp. in *Botaurus lentiginosus lentiginosus*.

R.T.L.

(272bx) Ward clears up some of the confusion regarding the genus *Deropristis*. Reviewing the Acanthocolpidae he points out that *Acanthopsolus* does not fall well within the limits of Acanthocolpinae and is led to make it type of a new subfamily, Acanthopsolinae. The value of various structures as criteria for the differentiation of genera and species is commented upon. More extended studies on living specimens in large numbers are needed to eliminate unreliable specific characters based on precise measurements derived from fixed specimens.

R.T.L.

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[cont.] Editado para comemorar o 25° aniversario de suas actividades
scientificas (1913-1938). Rio de Janeiro, 1938, xx+589 pp.

- by. WEHR, E. E., 1938.—“A new species of crop worm, *Gongylonema phasianella*, from the sharp-tailed grouse.” pp. 523-525.
- bz. WETZEL, R., 1938.—“Zur Biologie und systematischen Stellung des Dachslungenwurmes.” pp. 531-535.
- ca. WITENBERG, G., 1938.—“Studies on Acanthocephala. 3. Genus *Oncicola*.” pp. 537-560.
- cb. YAMAGUTI, S. & MIYATA, I., 1938.—“Notes on *Moniliformis dubius* Meyer, 1933.” pp. 567-568.
- cc. YOSHIDA, S. & TOYODA, K., 1938.—“Artificial hatching of ascarid eggs.” pp. 569-577.

(272by) Wehr describes *Gongylonema phasianella* n. sp., from the crop of *Pediocetes phasianellus phasianellus* in Nebraska. Four species of this genus are recorded from gallinaceous birds but the new species can be distinguished by the fact that the cuticular bosses are few in number and are concentrated mainly in the region of the cervical papillae. They are not interrupted at the level of the excretory pore. The left spicule is not barbed at its distal end. P.A.C.

(272bz) Wetzel describes the developmental stages of the badger lungworm in the intermediate host. He has implicated the following land snails as vectors: *Deroceras agreste*, *Arion hortensis*, *Cepaea nemoralis*, *C. hortensis*, *Fruticicola hispida*, *Euomphalia strigella* and *Succinea putris*. The worm reaches sexual maturity in 18 to 19 days. P.A.C.

(272ca) Witenberg gives descriptions and a key for the 9 species which he considers valid in the genus *Oncicola*. The list includes a new species *O. travassosi* from *Felis bustis* in Palestine. R.T.L.

(272cb) Yamaguti & Miyata agree with the differentiation of *Moniliformis dubius* from *M. moniliformis*. So far *M. dubius* has been found exclusively in rats captured in ships and not in those collected ashore. This supports the suggestion of Chandler that a grain insect is intermediate host. R.T.L.

(272cc) Yoshida & Toyoda have successfully hatched eggs of ascarids by enclosing them in a capsule of egg membrane and inserting them into various regions of a mammalian host. *In vitro* hatching, 40% or more, has also been obtained in the following media: 1/20 egg albumen, 1/300 egg yolk, 1/10 dog blood serum, 0.1% sugar solution, 1/20 human milk, 1/50 cow's milk, 1/50 skim milk, 0.1% peptone and 0.05% glucose. Less successful results have been obtained with bouillons and with artificial gastric and pancreatic juices. P.A.C.